



2021

Annual Report



Organization of the Petroleum Exporting Countries



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**Organization of the Petroleum Exporting Countries
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Foreword



Mohammad Sanusi Barkindo

OPEC Secretary General

In 2021, COVID-19 was once again a running theme throughout the year. Miraculously effective vaccines gave people hope and many people were vaccinated worldwide, but not equally. By the end of the year, about 60% of the world's population received one dose and 50% two doses, but notably many less developed countries, particularly in Africa, where some rates were below 5%.

The news was filled with reports of coronavirus variants over the year, which surged in all countries. Of particular concern were Delta, which flared up in 2Q21 and Omicron, which made its appearance in 4Q21. Omicron quickly became the most widespread variant in December. Fears that the variant would challenge vaccines came true to some degree, though the variant itself seemed less deadly.

Hospitalization rates rose and fell accordingly. Overall, the world was more relaxed over the second year of the pandemic, as science caught up with the virus and lockdowns were less long and severe. Altogether, this had a knock-on effect on the oil industry and the global economy, which rebounded strongly from 2020 when the pandemic first struck.

Though COVID-19 continued to be a major challenge throughout 2021, the global GDP for 2021 reached 5.6%, reflecting 5.7% growth in the US and 5.2% growth in the Euro-zone. The emerging economies recovered well from COVID, with China's growth at 8.1% and India's at 8.8%. The Russian Federation remained at 4% and Brazil at 4.7%.

The global oil market continued its impressive recovery, driven by strong global oil demand, given the easing of lockdowns worldwide and resulting increase in mobility. Global oil demand growth in 2021 reached 5.7 mb/d.

The market was strongly supported by the relentless efforts of the Declaration of Cooperation (DoC), which continued to work to rebalance supply and demand throughout the year.

After implementing the largest and longest crude oil production adjustments in 2020 due to unprecedented events and the shocking impact of COVID-19, participating countries in the DoC agreed to meet regularly throughout 2021 in order to be able to react quickly to any changes during the recovery. To that end, 11 OPEC and non-OPEC Ministerial meetings (ONOMM) were held over the year.

At the conclusion of the 13th ONOMM on 5 January – the first of the year – it was determined that 2 mb/d would be gradually returned to the market, with the pace being determined by market conditions. To this end, 0.5 mb/d was added starting in January, adjusting the production reduction from 7.7 mb/d to 7.2 mb/d. Monthly adjustments were to be no more than 0.5 mb/d per month until the end of July.

In addition to this, Saudi Arabia agreed to a significant additional voluntary supply adjustment of 1 mb/d starting 1 February which continued for three months, supporting the stability of the market. Various countries worked to catch up compensation shortfalls throughout the year, as agreed by the ONOMM.

By mid-year, at the 17th ONOMM held on 1 June, the meeting noted the ongoing strengthening of market fundamentals, with oil demand showing clear signs of improvement and OECD stocks falling as the economic recovery continued in most parts of the world. At the 19th ONOMM on 18 July it was determined that overall production should be upwardly adjusted by 0.4 mb/d on a monthly basis starting in August until phasing out of the 5.8 mb/d production adjustment.

Throughout the year, the DoC maintained high conformity levels, which contributed significantly to market rebalancing and stability.

The air was festive as the DoC celebrated its 5th anniversary on 10 December. During reminiscences, it was recognized that if not for the courageous countries that joined together on that fated day five years earlier, the oil sector would, without a doubt, be in a different situation.

When we look back to 2016, very few believed that the collaborative efforts would grow and evolve into a major, robust cooperative force to help restore much-needed stability in the global oil market. However, the 23 oil-producing countries have continued to rise to the challenges they have encountered, including instrumenting effective and visionary policies to combat the devastating impact of the COVID-19 pandemic.

These efforts have supported the global pandemic recovery process and have been recognized at the highest levels of government and by other international organizations and academia.

Another theme which moved into center stage over the year was climate change, including its effect on COVID-19 recovery plans. A push was on to ‘build-back greener’, and there were calls to submit pledges on reducing the production and use of fossil fuels.

To this end, the Saudi Government announced early in the year the ‘Saudi Green Initiative’ and ‘Middle East Green Initiative’ as important contributions to global efforts to combat climate change, and a roadmap was delivered near the end of October at the Saudi Green Initiative Forum, held 23–25 October. G20 leaders had already endorsed the Kingdom’s Circular Carbon Economy idea and its 4Rs – reduce, reuse, recycle and remove – as an inclusive and balanced way to deal with greenhouse gas (GHG) emissions.

Severe climate events also continued to make headlines throughout the year, adding fire to COP26 talks held in Glasgow, Scotland from 31 October to 12 November. The last COP had been held in December 2019. COP26 led to adoption of the Glasgow Climate Pact, which includes a range of agreed items, including strengthened efforts to build resilience to climate change, curb GHG emissions and provide the necessary finance for both.

All in all, the world and the oil industry faced serious challenges in 2021 and proved once again how resilient they are. DoC participating countries have been creative and tough, extracting the possible from the impossible with strength and purpose. The DoC will continue to develop from strength-to-strength.



Mohammad Sanusi Barkindo
OPEC Secretary General



The World Economy

In 2021, the world economy rebounded considerably from the 2020 outbreak of the COVID-19 pandemic. However, the pandemic continued to be a major challenge throughout the year, particularly with the emergence of new variants such as Delta in 2Q21 and Omicron in 4Q21.

As the world economy went through a turbulent time since the start of the pandemic and while major uncertainties remained, the base for a recovery firmed during the year. However, this has come at the price of globally rising debt levels as the worldwide economic recovery continued to be significantly supported by unprecedented monetary and fiscal stimulus.

Additionally and importantly, the recovery remained uneven between economies and within countries over the year. Economies that were able to gradually contain the pandemic, thanks to vaccination campaigns and

other successful containment strategies, and which had the financial capacity to provide economic stimulus measures, rebounded quickly. This stands in contrast to economies that had less access to vaccinations, applied less successful containment strategies and had only limited financial resources for fiscal and monetary stimulus.

The US and China led the recovery in 2021, while other major OECD economies also recovered well, albeit at a lower rate, including the Euro-zone and Japan, which both implemented major lockdown measures throughout the year. India faced severe COVID-19-related challenges in 1H21 that had a dampening impact on its recovery, despite strong full-year growth. Laggards in the global recovery were mostly economies in Latin America, Africa and low-income Asian

Table 1

World economic growth rates, 2020–2021, (% change over previous period)

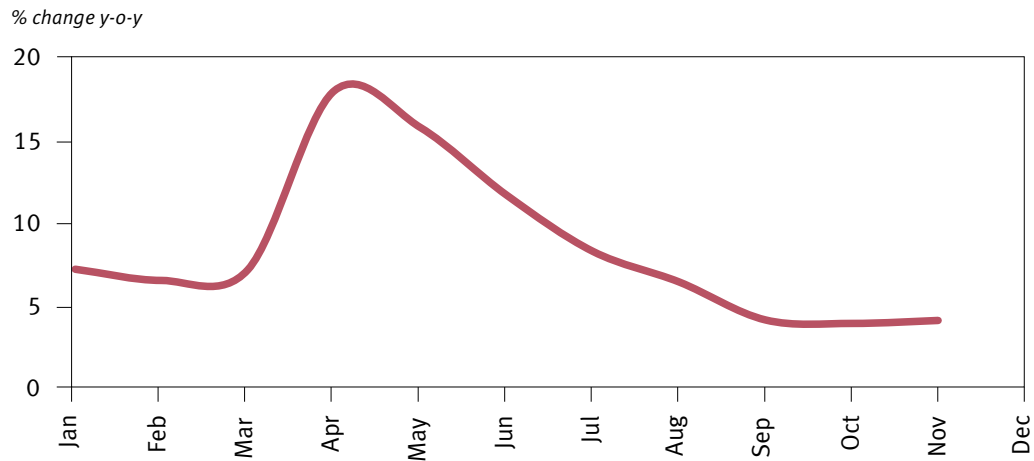
Grouping/country	2020	2021
OECD	-4.6	5.2
Other Europe	-4.2	5.8
Developing countries	-4.5	5.1
Africa	-2.1	3.7
Latin America and Caribbean	-6.7	6.1
Asia and Oceania	-4.5	5.2
Asia-Pacific	-3.6	4.1
OPEC	-5.2	3.0
China	2.3	8.1
FSU	-2.7	3.9
Total world	-3.3	5.6

Sources

OPEC, OECD, IMF and International Financial Statistics.

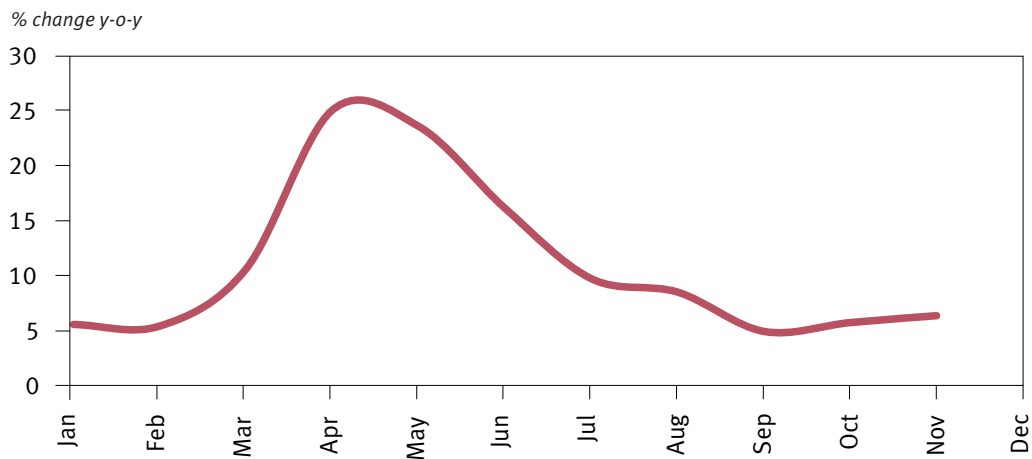
Note: All figures in this section are based on the February 2022 Monthly Oil Market Report.

Figure 1
Global industrial production, 2021



Source
Netherlands Bureau for Economic Policy Analysis and Haver Analytics.

Figure 2
World trade volumes, 2021



Source
Netherlands Bureau for Economic Policy Analysis and Haver Analytics.

countries. Of these economies, however, commodity-exporting economies did relatively better, benefitting from the strong rise in global oil demand.

The world economy's 1Q21 growth remained impacted by lockdown measures in numerous countries. With the support of stimulus measures and the easing of lockdowns amid decelerating infection rates, momentum gained pace significantly by mid-2Q21. This dynamic also materialized in a broad-based demand recovery in the contact-intensive services sector. It wasn't until 4Q21 that the new Omicron variant led to slowing growth once again, very much in line with the seasonality of the pandemic in 2020. Thus, the COVID-19 pandemic was the single-most important element in the world economy once again in 2021. The subsequent issues of inflation, supply chain bottlenecks and a tight labour market were mainly an outcome of the pandemic. These consequences, in combination with counterbalancing unprecedented stimulus measures, were responsible for the relatively volatile growth patterns seen in 2021.

Monetary stimulus packages were considerable and remained an important support factor in the global economic growth dynamic in 2021. Massive monetary stimulus programmes launched by major central banks led to their balance sheets expanding significantly in 2021. However, quantitative easing (QE) efforts, in combination with strong underlying global demand and supply-chain bottlenecks, resulted in higher inflation levels, which are now persisting in major economies. To curtail the potentially long-lasting impact of inflation, major central banks announced at the end of 2021 that they would adjust their QE programmes and consider reducing their very accommodative monetary policies. Higher inflation impacted economies to varying degrees.

In developed economies, US inflation picked up strongly and inflation in Europe rose as well, albeit slightly less, while inflation in Japan remained low. At the same time, in the emerging economies, inflation was significant in Russia and Brazil and led to rate hikes, while in key Asian economies, inflation remained moderate in India and was low in China throughout the year.

In the US, the Federal Reserve announced a faster tapering of ongoing reductions in QE measures in December. On the other hand, the European Central Bank (ECB) announced that it would only gradually start reducing its QE measures and does not plan to hike interest rates before 2023. The Bank of England (BoE) pursued the fastest path, having announced a rate increase at its December meeting, ahead of other major central banks, while ending QE measures in 2021. The Bank of Japan (BoJ), with the relatively largest monetary stimulus and an extensive history of QE policies, announced a reduction in pandemic-related QE.

OECD

OECD GDP is estimated to have grown by 5.2% in 2021, compared with a decline of 4.6% in 2020. In the US, growth was very strong throughout the year, holding up well above a 6% quarter-on-quarter (q-o-q) seasonally adjusted annualized rate (SAAR), except in 3Q21, as COVID-19 and additional supply chain bottlenecks negatively impacted growth momentum. Growth stood at 5.7% in 2021. In the Eurozone, growth was negative in 1Q21, while it gained considerable pace in 2Q21 and 3Q21, before slowing again in 4Q21 amid widespread lockdown measures due to a rise in Omicron-related infections. Fiscal year growth for 2021 stood at 5.2%. In Japan, growth was very much held back, even during the Summer

Olympics, as vaccination rates were relatively low and the country was primarily fighting the pandemic via widespread social distancing measures, which negatively impacted demand. Only 4Q21 growth is estimated to have picked up significantly. Fiscal year growth for 2021 is estimated at 1.8%.

OECD Americas

US

The US made strong progress in 2021, with a dip in the strong dynamic during 3Q21. Ongoing supply chain shortages, especially for semi-conductor-related industries, and continuing tightness in the labour market, impacted economic growth abilities, particularly in 3Q21. Strong underlying growth, however, was visible again in 4Q21, when despite COVID-19-related impacts, GDP growth was announced at a very strong level of 6.9% q-o-q SAAR, as reported in the first available estimate by the Bureau of Economic Analysis. This compared with 2.3% q-o-q SAAR in 3Q21 and 6.3% in 1H21. After continuing with very accommodative monetary policy for most of the year, central bank policies switched towards the end of the year, amid very high inflation of more than 7% and strong economic growth. Inflation stood at 7.1% year-on-year (y-o-y) in December, after reaching 6.9% y-o-y in November. Full year 2021 growth stood at 5.7%.

OECD Europe

Euro-zone

While growth in the Euro-zone surprised to the upside throughout 2021, the region was significantly impacted by the pandemic in 1Q20, leading to a decline in its economy, which stood at -0.8% q-o-q SAAR. Growth in 2Q21 and 3Q21 was stronger than expected

at 9.1% q-o-q SAAR in 2Q21 and 9.4% q-o-q SAAR in 3Q21. In 4Q21, growth was once again impacted by lockdown measures and grew at only 1.2% q-o-q SAAR, as reported by Eurostat, the Euro-zone's statistical office. Momentum leading into the summer spending season was the main contributor to strong full-year growth. The combination of fiscal stimulus and accommodative monetary policy continued to support consumption and investment throughout the year. The global trade recovery was another supportive factor in 2021, especially for major exporters such as Germany, France and Italy. After strongly rising in the first three-quarters of 2021, inflation continued to go up further in 4Q21. In the meantime, the ECB shifted its tone towards monetary tapering in December. Inflation in the Euro-zone stood at 5% in December and 4.9% y-o-y in November. Full year 2021 GDP growth reached 5.2%.

OECD Asia-Pacific

Japan

Contrary to the US and the Euro-zone, Japan saw only muted growth in 2021. After a decline in 1Q21 of 2.9% q-o-q SAAR, the economy managed to recover slightly in 2Q21 to reach growth of 2% q-o-q SAAR. The Japanese economy experienced a decline again in 3Q21, with COVID-19 restrictions lowering domestic consumption. GDP in 3Q21 was reported to have declined by 3.6% q-o-q SAAR. While government stimulus continued in 3Q21, with government expenditures growing by 4.1% q-o-q SAAR, private consumption declined by 5.1% q-o-q SAAR. Japan entered 4Q21 in a very improved situation, with vaccination rates of around 80%, strongly increasing consumer confidence and leading business sentiment indicators, which supported strong growth. The government approved

additional stimulus in its supplementary 2021/2022 budget of 31.6 trillion yen. Inflation remained low, but growth is estimated to be strong. The BoJ considered tapering its extraordinary pandemic-related monetary policies. Growth in Japan has been the lowest compared with its major peers within the OECD, reaching an estimated level of 1.8%.

Emerging countries

Brazil

Brazil's GDP expanded by 5.9% in the first three quarters of 2021, following a contraction of 3.8% in 2020. Imports stood at \$21.9 billion (\$ bn) in 2021, while exports fell, registering \$28.0 bn. The trade balance recorded about \$6 bn in 2021 from \$5.95 billion. Over 2021, the inflation rate averaged about 9.0% y-o-y following an average of 3.2% y-o-y in 2020.

Russia

Russia's real GDP is forecast to grow by 4.0% y-o-y in 2021, following a contraction of about 3.0% in 2020. Over the first three quarters of 2021, the country's real GDP expanded

by about 4.9%, indicating that the economy is back to pre-pandemic levels. The consumer price index fell slightly to 8.39% y-o-y in December from 8.40% the previous month. In 2021, inflation rose more than twice the central bank's target of 4%, amid a rapid economic recovery, labour shortages across many industries and ongoing supply chain disruptions.

In response to inflationary pressures, the Russian central bank raised its benchmark policy rate by 100 basis points to 8.5% in December, the highest point since September 2021.

India

India's economy rebounded at a slow pace amid the lingering impact of the Delta and Omicron variants. In the first three quarters of 2021, real GDP averaged 10.0% y-o-y. The consumer price index jumped to 5.6% in December from 4.9% in November, recording the highest rate since July and remaining within the central bank's 2–6% target range for the sixth consecutive month. On a monthly basis, consumer prices fell by 0.36% in December, the first decline in 11 months. The whole price index inched down to 13.6%

Table 2

Summary of macroeconomic performance of the 'BRIC' countries in 2021

	GDP growth rates	Consumer price index	Current account balance	Governmental fiscal balance	Net public debt
		% y-o-y change	\$ bn	% of GDP	% of GDP
Brazil	4.7	8.3	1.2	-4.8	81.7
Russia	4.0	6.7	106.7	0.2	17.2
India	8.8	5.3	-46.8	-7.0	57.7
China	8.1	0.9	433.7	-4.9	21.7

Sources

Source: OPEC, Consensus Forecast and Economist Intelligence Unit.

in December from 14.2% the previous month. On a monthly basis, wholesale prices fell to 0.35% in December from growth of 1.56% in November.

On the monetary policy front, the Reserve Bank of India kept the repo rate at 4% in December and the reverse repo rate at 3.4%, maintaining an accommodative monetary policy stance to support the economic recovery and help mitigate the negative impacts of COVID-19. India's yearly average composite Purchasing Managers' Index (PMI) stood at 51.1 in 2021, up from 44.3 in 2020. Meanwhile, the average manufacturing PMI increased to 53.8 compared with 49.4 in 2020, and the average services PMI was at 50.9, up from 41.7 in 2020.

China

China's real GDP expanded by 8.1% y-o-y in 2021, the fastest expansion in a decade, with the economy growing by 4.0% y-o-y in 4Q21 and 4.9% y-o-y in 3Q21. However, China's recovery momentum might slow, as both private consumption and supply could remain disrupted due to the 'zero-COVID-19' policy. The country's latest industrial production data shows China expanded by 4.3% y-o-y in December 2021, accelerating from 3.8% growth the previous month. The current uptick was supported by a recovery in energy production and moderation of raw materials prices. Industrial production expanded by 10.9% y-o-y in 2021. Indeed, manufacturing investment was on the high side due to robust external demand, government incentives and improved profitability. China's yearly average composite PMI stood at 51.9 in 2021, up from 51.4 in 2020 and compared with 51.7 in 2019. The country's yearly average manufacturing PMI was at 50.7, down from 51.0 in 2020 and compared with 50.4 in 2019. Meanwhile, its average services PMI

was at 52.7 in 2021, up from 51.1 in 2020 and compared with 52.5 in 2019.

Developing Countries

Economic growth in developing countries is estimated to expand by 5.1% y-o-y in 2021 following an estimated contraction of 4.9% y-o-y in 2020. Africa's real GDP growth is estimated to grow by 3.7% y-o-y following an estimated decline of 2.1% y-o-y in 2020. Latin America's GDP growth is estimated to grow by 6.1% y-o-y following an estimated contraction of 6.7% y-o-y in 2020. Other Asia's economic growth is estimated to register 2.6% y-o-y in 2021 following an estimated contraction of 2.7% y-o-y in 2020. GDP growth in the Middle East and North Africa region is forecast at 3.1% y-o-y in 2021, following an estimated contraction of 2.1% y-o-y in 2020.

Exchange rate of the US dollar

On the currency markets, the US dollar (USD) declined for the second consecutive year against major currencies as high inflation caught up with dollar appreciation and further eroded the value of the USD against major currencies. The USD declined by 1.7% y-o-y against the euro, 6.3% against the Swiss franc, and 1.1% against the pound sterling. Meanwhile, it continued to appreciate against the Japanese yen (4.1% y-o-y), as Japan continued to hold steady on raising interest rates.

USD movement against emerging market currencies continued to be mixed y-o-y. The USD declined for a second consecutive year against the yuan by 1.6% amid China's relaxed monetary policy. Meanwhile the dollar rose for the second consecutive year against the Brazilian real by 5.5% and by 3.3% against the Indian rupee.

Table 3
Comparison: OPEC and total world, 2020–2021*

	OPEC 2020	Total world 2020	OPEC 2021	Total world 2021
Real GDP growth rate (%)	-5.2	-3.3	3.0	5.6
Petroleum export value (\$ bn)	321.1	967.1	567.3	1,719.0
Value of non-petroleum exports (\$ bn)	430.7	16,173.9	466.1	20,144.0
Oil exports (as percentage of total exports %)	42.7	5.6	54.9	7.9
Value of imports (\$ bn)	662.2	17,160.8	689.9	21,898.8
Current account balance (\$ bn)	-65.5	375.5	167.2	570.0
Crude oil production (mb/d)	25.65	69.09	26.32	69.61
Reserves, excluding gold (\$ bn)	911.6	13,127.5	970.0	13,914.8

*2021 data are preliminary estimates.

Note

Figures are partly estimated.

Sources

IMF, EIU, World Bank Development Indicators and OPEC.

The background features several overlapping, curved, organic shapes in various shades of green, ranging from light to dark. These shapes create a sense of movement and depth, framing the text below.

Oil Market Developments

Crude oil price movements

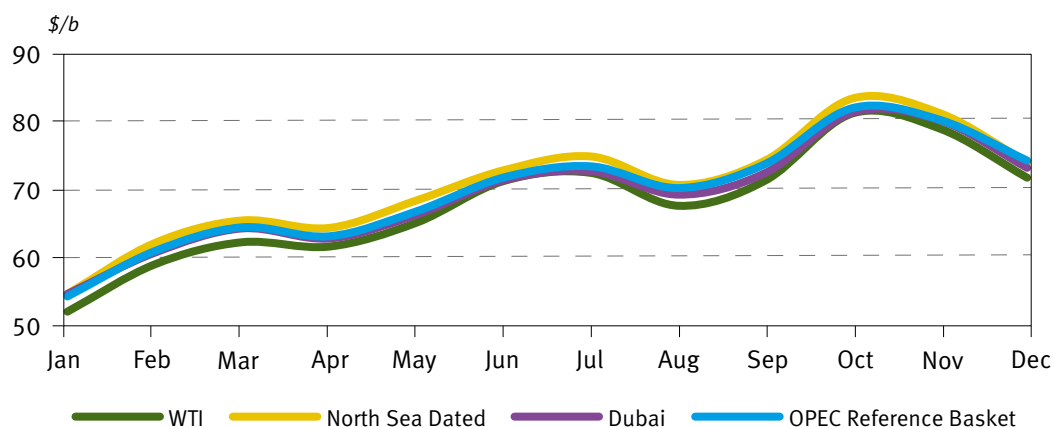
Global oil market conditions improved significantly in 2021 after an exceptionally disruptive 2020, despite the emergence of several new COVID-19 variants with uneven severity and impact on the global economy and oil demand. World oil supply/demand fundamentals improved markedly in 2021, along with a robust rebound in global GDP growth of 5.6% amid large economic stimulus packages and the rollout of vaccinations across the world, which improved market sentiment and boosted global oil demand outlooks. OPEC Member Countries and non-OPEC countries participating in the Declaration of Cooperation (DoC) continued to play a central role in contributing to reducing market uncertainty and volatility. Oil prices continued to increase throughout the year, averaging significantly higher year-on-year (y-o-y) in 2021.

OPEC Reference Basket

The value of the OPEC Reference Basket (ORB) rose substantially in 2021, with higher price levels also seen in all other spot and futures crude oil benchmarks. Over the year, the ORB increased by \$28.42, or 68.5%, on average, compared with 2020, to settle at \$69.89 per barrel (\$/b). All ORB component values rose alongside their perspective crude oil benchmarks, amid improving official selling prices and crude differentials.

In 2021, spot crude oil prices witnessed the best yearly performance in a decade, with North Sea Dated and Dubai prices recording their highest yearly average increases since 2011, recovering from 2020 lows. On a yearly average, North Sea Dated and Dubai rose in 2021 by \$29.13 and \$27.07, or 69.9% and 64.0%, respectively, y-o-y to stand at

Figure 1
Monthly oil price movements, 2021



Source
Argus, OPEC and Platts.

Note: All figures in this section are based on the February 2022 Monthly Oil Market Report.

\$70.80/b and \$69.38/b, while WTI rose by \$28.74/b, or 72.9%, to average \$68.17/b.

Spot crude prices rose firmly in 1H21 amid significant improvements in physical market fundamentals and consecutive monthly declines in OECD commercial oil stocks. The recoveries in global oil demand and refinery throughput in 1Q21 added support, although crude runs were cut due to cold weather in the US, while the refinery maintenance season in 2Q21 weighed on spot crude prices and crude differentials. On the supply side, efforts by OPEC and non-OPEC participating countries in the DoC further contributed to a reduction in the market's crude overhang. Moreover, spot crude prices were supported by optimistic futures markets on the back of considerable economic stimulus measures, specifically in the US, and investors priced anticipation of a strong oil demand recovery amid optimism about vaccination rollouts around the globe. Nonetheless, the physical market was not as strong as the futures market, which was reflected in relatively weak crude differential values, specifically in the Atlantic Basin, due to softening buying interest from Chinese and European refiners amid a rebound in COVID-19 infections, fresh lockdowns and mobility restrictions in many countries, particularly India.

Crude spot prices continued to increase in 2H21. Global oil demand and refinery intakes continued to rise significantly, specifically during the driving season, amid easing COVID-19 mobility restrictions and rising road transportation fuel and petrochemical feedstock demand. The strength of the market extended into September and October on the expanding power crisis in key European and Asian countries, which boosted demand for alternative power generation fuels. In 4Q21, rising oil futures prices and

prospects of higher oil demand in the winter months due to gas-to-oil switching, as well as stronger refining margins and a continuing decline in oil stocks in major consuming regions, greatly supported spot crude oil prices. Spot prices were also supported by supply disruptions in several regions on the back of planned and unplanned outages, including in the Gulf of Mexico (GoM) after Hurricane Ida.

However, oil prices eased in November and December on fears of the emergence of the Omicron variant of COVID-19, which led to a surge in COVID-19 cases in Europe and other regions. These developments raised concerns that the reinstatement of lockdown measures and mobility restrictions could dampen demand for transportation fuels. Furthermore, limited crude import quotas for independent refiners in China and refinery maintenance weighed on prices.

The spread between light sweet and medium/heavy sour crudes widened significantly in 2021 y-o-y, on better performance of light sweet crude compared with medium and heavy sour grades. Higher light and middle distillate margins compared with heavier sour distillates, amid strong demand from the road transportation and petrochemical sectors, while high desulfurization costs strongly supported demand for sweet crudes. A lower supply of light sweet crude in 2021, specifically from US tight oil, also added support to light sweet crude values.

The sweet/sour crude differential continued to widen over 1Q21 and increased significantly from 4Q20 in all key markets. This was due to better performance of light product distillates, mainly naphtha and gasoline, compared with a lagging recovery in middle distillate margins like diesel and jet fuel, while high sulfur fuel remained weak.

Table 1

Average quarterly and yearly spot prices for selected crudes, 2020–2021

\$/b

	2020	1Q21	2Q21	3Q21	4Q21	2021	% Change 2021/20
OPEC Reference Basket	41.47	60.22	67.42	72.58	78.84	69.89	68.5
OPEC Basket crudes							
Arab Light	41.91	60.71	68.26	73.50	79.58	70.65	68.6
Basrah Light	41.55	60.66	67.48	72.51	78.28	69.86	68.1
Bonny Light	41.53	61.16	68.06	73.56	79.22	70.63	70.1
Djeno	35.77	53.62	61.26	65.95	72.08	63.35	77.1
Es Sider	40.06	59.37	66.50	71.95	78.29	69.16	72.6
Girassol	42.64	61.83	68.70	73.71	80.50	71.31	67.2
Iran Heavy	40.77	60.00	67.21	72.47	78.99	69.80	71.2
Kuwait Export	41.49	60.55	68.01	73.26	79.64	70.50	69.9
Merey	28.12	42.45	49.67	53.74	59.49	51.45	83.0
Murban	42.98	60.29	67.58	72.31	79.66	70.09	63.1
Qatar Marine	42.58	60.48	67.54	72.57	78.98	69.99	64.4
Rabi Light	40.22	60.61	68.25	72.94	79.07	70.34	74.9
Saharan Blend	42.12	61.30	68.11	73.41	80.21	70.89	68.3
Zafiro	41.54	61.40	68.99	73.37	80.09	71.09	71.1
Other OPEC crudes							
Arab Heavy	41.45	60.46	67.61	72.66	78.68	69.98	68.8
Dubai	42.31	60.21	67.02	71.59	78.23	69.38	64.0
Dukhan	42.44	60.24	67.33	72.41	79.34	69.92	64.8
Forcados	41.56	60.85	68.67	73.11	80.29	70.81	70.4
Iran Light	40.36	58.84	65.91	69.75	76.82	67.90	68.2
Zueitina	40.14	59.41	66.33	71.55	78.16	68.99	71.9
Other non-OPEC crudes							
North Sea Dated	41.67	61.07	68.71	73.40	79.53	70.80	69.9
Isthmus	36.61	57.82	64.74	67.89	73.92	66.20	80.8
Oman	43.20	60.24	67.13	71.73	78.24	69.46	60.8
Suez Mix	40.23	58.71	65.78	69.62	76.69	67.77	68.5
Tapis	43.24	62.25	69.75	75.27	83.43	72.82	68.4
Urals	41.83	60.41	67.35	71.29	78.25	69.45	66.0
West Texas Intermediate	39.43	58.06	66.19	70.59	77.30	68.17	72.9
West Texas Sour	39.47	58.81	66.51	70.63	76.83	68.32	73.1
Differentials							
Bonny Light - Arab Heavy	0.08	0.70	0.45	0.90	0.54	0.65	
North Sea Dated – WTI	2.24	3.01	2.52	2.81	2.23	2.63	
North Sea Dated – Dubai	-0.64	0.86	1.69	1.81	1.30	1.42	

Notes

Quarterly and yearly averages based on daily quotations.

Source

Platts, Argus, direct communications and OPEC.

Furthermore, the spread between low sulfur fuel oil and high sulfur fuel oil widened in 1Q21. The sweet/sour crude differential widened in Asia despite a restrained sour crude supply due to production adjustments, though the spread remained well below pre-COVID-19 levels. The trend continued in 2Q21, as a robust driving season and demand from the petrochemical sector lent support to light sweet crude.

In 2H21, the premium of light sweet crudes over heavy sour widened on average in all regions, due to the reduced availability of light sweet crudes, specifically in the Atlantic Basin, amid recovering demand. Meanwhile, a gradual increase in sour crude supply, in line with DoC production adjustments, also contributed to a widening of the spread. Furthermore, light and middle distillate margins strengthened, compared with heavier distillates, and the high cost of desulphurization of sour crude due to high gas prices weighed on the value of medium and heavy sour crudes.

Crude oil futures

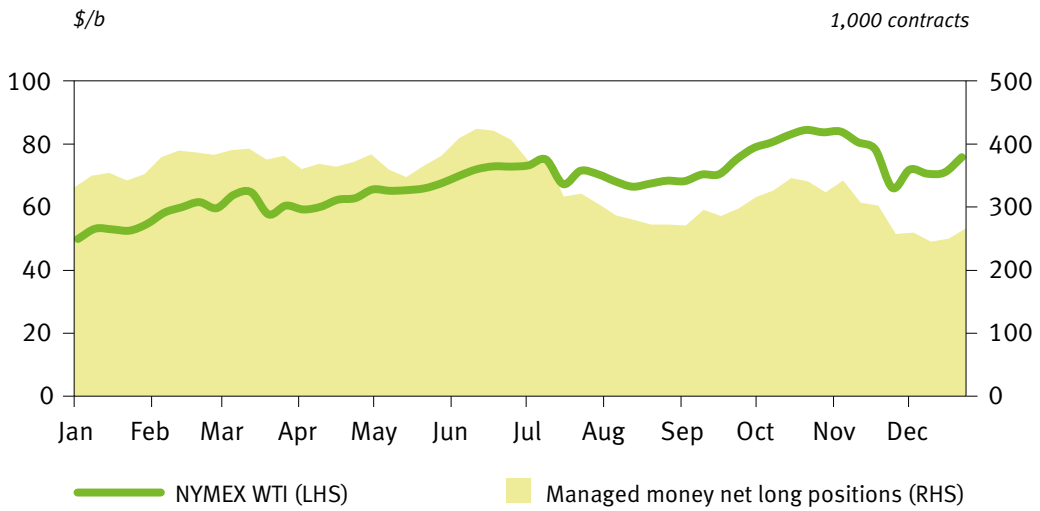
Crude oil futures prices ended 2021 markedly higher compared with late 2020, with major oil futures contracts ICE Brent and NYMEX WTI rising by 50% and 55%, respectively, amid robust global economic growth and a strong rebound in global oil demand in both OECD and non-OECD regions of 5.7 million barrels per day (mb/d), driven by the road transportation and petrochemical sectors. Accelerating the rollout of COVID-19 vaccines across the world helped ease strict lockdowns and mobility restrictions. The oil market was also widely supported by an easing global supply overhang, resulting in a drawdown of global oil stocks. In 2021, ICE Brent rose by \$27.74,

or 64.2%, on a yearly average, to stand at \$70.95/b, and NYMEX WTI was higher by \$28.77, or 73.1% y-o-y at \$68.11/b, compared with 2020 levels. DME Oman was higher by \$26.47, or 61.5% y-o-y to average \$69.50/b in 2020.

Crude oil futures prices rallied in 1H21 and continued to rise five months of the first six months of the year, driven by the anticipation of an economic rebound and a rapid recovery in oil demand. Accelerated vaccination rollouts in some major economies, along with easing lockdown measures, led to improving mobility data in Europe and North America. Moreover, declining OECD oil stocks for seven consecutive months added support.

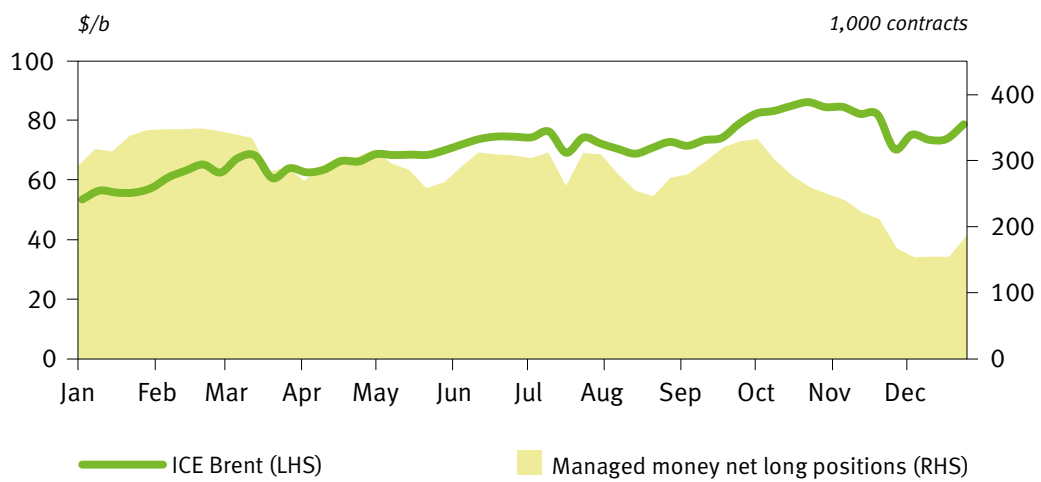
Major support to futures markets also came from firm equity markets, especially US equities, after a large \$1.9-trillion US stimulus bill was introduced, in addition to stimulus packages in other economies, including the European Union. Moreover, the US dollar weakened to its lowest level in about two-and-a-half years, adding support to crude oil prices and commodities in general in 1H21. Since late 2020 and over 1H21, the US dollar remained at its lowest level since 2018. Furthermore, cold weather across the Northern Hemisphere raised the prospect of higher demand for heating oil, while a weather-related energy crisis in the US caused a sharp decline in oil production, adding additional support to futures prices. However, the rise in futures prices was capped by concerns about the emergence and spread of new COVID-19 variants in several countries, which led governments to reinstate lockdowns and mobility restrictions and raised concerns about the oil demand recovery. Logistics issues, efficiency, and side effects caused by some vaccines weighed on sentiment. The deteriorating COVID-19 situation in India in April also

Figure 2
NYMEX WTI price versus managed money net long positions, 2021



Source
 Commodity Futures Trading Commission, CME Group and OPEC.

Figure 3
ICE Brent price versus managed money net long positions, 2021



Source
 Intercontinental Exchange and OPEC.

raised concerns about demand in the third-largest crude oil importer.

Oil futures prices continued to trend upward in 3Q21 on further improvements in global oil market fundamentals, as investors turned more optimistic about the outlook for the oil demand recovery and expectations of a significant oil market deficit in 2H21. Futures market optimism was bolstered by accelerating COVID-19 vaccination rates in major consuming countries and the easing of travel restrictions and data, indicating an ongoing recovery in global mobility, especially in the US and Europe. The large decline in OECD oil stocks from May, specifically US crude stocks, added support. Furthermore, in October, the risk of natural gas and coal shortages in Europe and Asia boosted sentiment for an additional increase in oil demand as a substitution fuel. Between May and September 2021, ICE Brent rose by \$6.6/b, or 10%, and NYMEX WTI increased by \$6.4/b, or 10%. However, futures prices witnessed volatility in 3Q21, due to the emergence of the COVID-19 Delta variant, which clouded oil demand outlooks in the short term. In September and in the first half of October, volatility was also fuelled by concerns about a potential global energy crunch and considerable oil supply disruptions in Mexico and the GoM. In 4Q21, after a sharp jump in October, futures prices retreated in November and December amid uncertainty regarding the impact of the rapid spread of the Omicron variant and its effect on the global economy and oil demand. However, overall global oil market fundamentals remained robust.

The spread between the ICE Brent and NYMEX WTI benchmarks narrowed in 2021 y-o-y, as oil demand recovered in the US amid slow production growth and several supply disruptions. This resulted in a rapid

decline in US crude oil stocks in 2021, including in the Cushing, Oklahoma, trading hub. The ICE Brent-NYMEX WTI spread narrowed by \$1.03 to average \$2.84/b in 2021. However, the transatlantic spread oscillated within a narrow interval between \$2 and \$4, fuelled by oil supply disruptions in the US and Canada, as well as supply constraints around Cushing, Oklahoma, and volatile exports in 2021.

Regarding speculative activity, hedge funds and other money managers contributed to oil price volatility. Despite oil prices rising by about \$28/b over 2021, speculators significantly reduced net long positions along with declining open interest specifically in 2H21, partly due to uncertainties about the impact of several COVID-19 variants on global oil demand.

Speculators boosted their bullish positions in 1Q21, raising their net long positions in March to their highest point in more than a year as speculators bet on rising oil prices and anticipated a recovery from the COVID-19 pandemic slump, along with prospects of tightening supply/demand fundamentals. Speculators were more optimistic about the WTI price outlook compared with Brent. Money managers remained bullish in 2Q21, further boosting their net-long positions related to crude, particularly in the NYMEX and WTI, amid signs of a swift global economic and oil demand recovery. Meanwhile, global oil supply growth was expected to be limited, including in the US. Nonetheless, speculators showed some caution in the second half of June by slightly reducing their net long positions, probably prompted by worries about a resurgence in COVID-19 cases in several countries, including the UK and some Asian countries. Money managers kept net long positions in combined ICE Brent and NYMEX WTI

futures and options at an average of 721,264 contracts in June, or about 9.2% higher compared with 660,343 contracts in January.

Hedge funds and other money managers continued to sharply reduce their total futures and options net long positions in July and August, which reached their lowest level since November 2020. This took place amid uncertainty about oil demand, fuelled by the rapid spread of the COVID-19 Delta variant across the world, specifically in the Asia-Pacific region. However, speculators recovered parts of their combined futures and options net long positions in September and early October as oil prices rose to multi-year highs, and as soaring energy prices for gas, coal and electricity in Europe and Asia likely urged speculators to bet on higher oil prices. Longer-than-expected disruptions in the US GoM also prompted money managers to raise their bullish positions. Nonetheless, combined futures and options net long positions related to both ICE Brent and NYMEX WTI stood at 648,834 lots in the week to 5 October, below the level registered in the week to 13 July.

Speculators resumed their selloffs in November and the first half of December amid rising concerns about the spread of the Omicron variant and a sharp decline in oil prices prompted speculators to heavily liquidate their long positions. Combined speculative net long positions for both ICE Brent and NYMEX WTI dropped to their lowest levels since November 2020. Combined futures and options net long positions related to ICE Brent and NYMEX WTI dropped by about 30% between the week of early November and 14 December, or an equivalent of about 174 mb, reaching the lowest level since November 2020. However, in the second half of December, money managers recovered part of

their long positions amid supply disruptions in several regions. By the end of the week of 28 December, money managers held net long positions equivalent to about 454 mb in the two main crude oil futures and options contracts.

Market structure

The market structure of all three major oil futures price benchmarks – ICE Brent, NYMEX WTI, and DME Oman – stayed in backwardation over 2021, a sign of improving global oil market fundamentals compared with 2020. Moreover, the market structure strengthened on steady declines in global oil stocks.

The futures price structure strengthened in 1Q21, with ICE Brent, NYMEX WTI, and DME Oman flipping into backwardation. The anticipation of a recovery in oil demand amid lower supply contributed to supporting near-term prices compared with forward months. In 2Q21, backwardation strengthened further on the continued oil demand recovery and supportive driving season, resulting in accelerating oil stock draws.

In 2H21, the market structure of all three major oil benchmarks remained in backwardation, as oil market fundamentals stayed solid. The structure strengthened in October, moving deeper into backwardation. The prospect of higher oil demand during the winter season due to gas-to-oil switching, amid soaring gas prices in the main trading hubs, supported near-month contracts. Nonetheless, the backwardation structure in all three markets weakened in the second half of November and December, mainly driven by a surge in the Omicron variant in several countries and expectations of an impact on global oil demand amid signs of a warmer-than-expected winter.

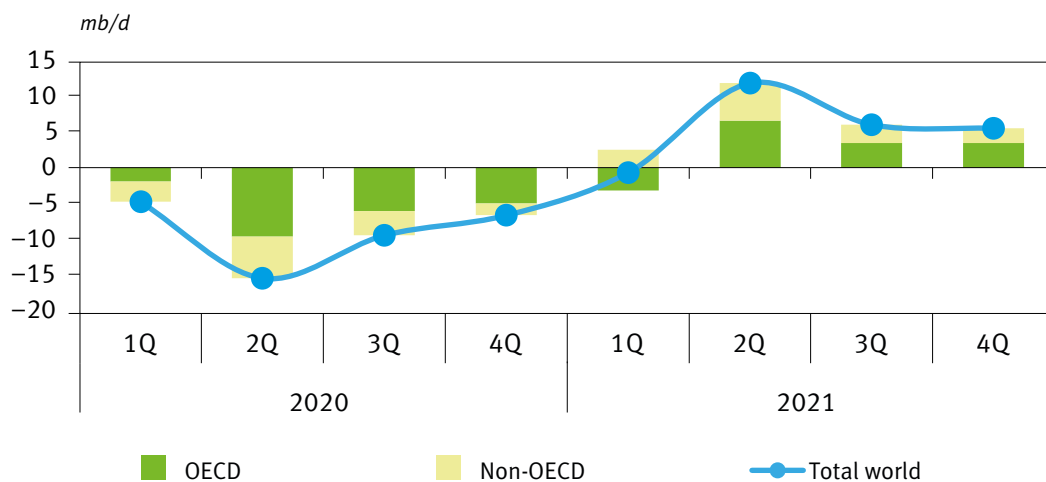
World oil demand in 2021

World oil demand strengthened after the end of 1Q21, though negatively impacted by a surge in the COVID-19 pandemic, particularly in the OECD. In 2021, world oil demand substantially outpaced 2020's historically low levels with an increase of 5.7 mb/d y-o-y, though remaining below pre-pandemic levels. In terms of the main regions, growth in the non-OECD was at 3.1 mb/d y-o-y, higher than additional requirements in the OECD, which were at 2.6 mb/d y-o-y. Following declines in 1Q21, world oil demand grew at historic levels y-o-y during 2Q21, on top of a record low baseline seen in 2020. World oil demand during 3Q21 and 4Q21 proved to be substantially more resilient than previously anticipated and was strongly supported by increasing mobility and various government stimulus programmes across the world. In the OECD, the US continued to be a major driver

of oil demand, mostly supported by demand for personal mobility, manufacturing and petrochemical feedstock, notably for the petrochemical industry, as well as other service sector-related activities, such as air travel and supply chain processes. In the OECD, a strong industrial sector induced economic growth, while massive vaccination programmes and other COVID-19 management measures led to reductions in hospitalization, leading to the relaxation of stringent COVID-19 containment measures. These factors backed demand for both transportation and industrial fuels in the OECD region, particularly in major consuming countries. In the non-OECD, China's oil demand grew resiliently as the transportation and industrial sectors supported additional requirements.

Factors contributing to oil demand growth were manifold. Economic stimulus, as well as mobility and supply chain activities, which backed trade-related activities, particularly in

Figure 4
World oil demand by main region, y-o-y growth, 2020–2021



Source
OPEC.

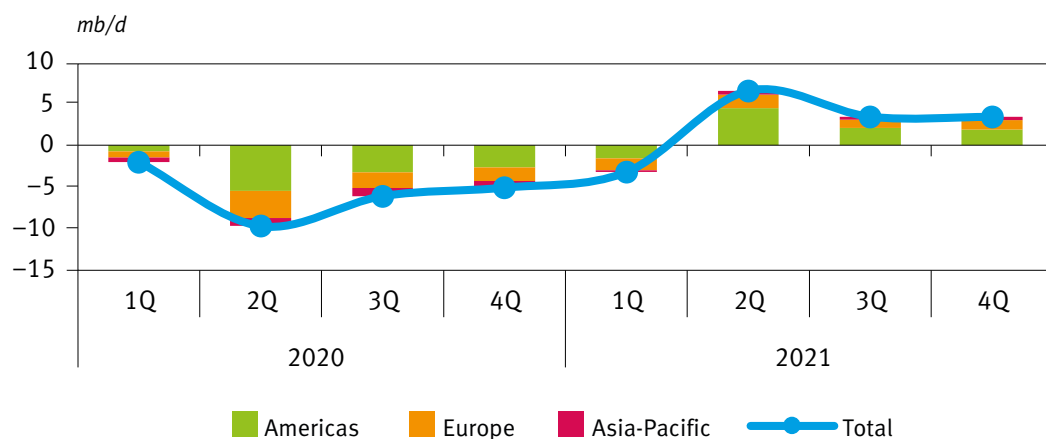
the US and Europe, continued to support demand for gasoline, which grew by 1.9 mb/d y-o-y globally in 2021. Furthermore, industrial and petrochemical activities helped to rejuvenate diesel, liquefied petroleum gas (LPG) and naphtha requirements, with diesel recording growth of 1.2 mb/d y-o-y, LPG rising by 0.8 mb/d and naphtha by 0.6 mb/d y-o-y globally in 2021, respectively. Resumption of domestic and international travel, particularly within regions and in Europe, aided growth. In Europe, most regional and domestic air restrictions were removed, while in the US, flight bans were lifted, supporting global jet kerosene demand, which grew by 0.6 mb/d y-o-y. Finally, household and industrial demand contributed further to LPG growth.

OECD America

The latest OECD Americas annual oil demand data show a y-o-y increase of 1.7 mb/d in 2021. Demand for oil in the Ameri-

cas in 2021 was strongly driven by a post-COVID-19 revival in mobility and strong industrial sector growth. Furthermore, the easing of supply chain bottlenecks and massive government stimulus strongly lent additional support to both mobility and trade-related activities, combined with strong economic growth and manufacturing sector performance, mostly in the US. Oil products responded positively to these underlying factors. Gasoline was the main driver of oil demand, followed by jet kerosene and residual fuel oil requirements, which contributed to the bulk of increases. Looking at contributions by fuel to oil demand configuration, gasoline grew by 0.8 mb/d y-o-y. Jet/kerosene gained 0.3 mb/d y-o-y and diesel grew by 0.2 mb/d y-o-y, respectively, on an annual basis, while LPG gained advantage through high natural gas prices, which led to fuel switching, and grew by 0.3 mb/d, y-o-y.

Figure 5
OECD oil consumption by quarter and region, y-o-y growth, 2020–2021



Source
 OPEC.

OECD Europe

European oil demand grew by 0.6 mb/d in 2021, with gains originating mainly in transportation fuels. Demand for petroleum products recovered appreciably in the region, particularly in the four main consuming countries. Oil demand in the UK, France, Germany and Italy was driven by an increase in air traffic and mobility as countries relaxed most stringent COVID-19 containment measures. The recovery of air traffic within the region also boosted demand for jet fuel, which grew by 72 trillion barrels per day (tb/d) y-o-y in 2021. Gasoline demand responded positively to increased mobility and government stimulus within the region, and grew by 0.2 mb/d y-o-y. Furthermore, diesel grew by 0.3 mb/d in 2021 y-o-y. Oil demand gains were attributed to relatively strong economic growth recovery, relaxation of some stringent COVID-19 containment measures, as well as the easing of supply chain bottlenecks, which supported trade-related activities. Additionally, strong manufacturing activities contributed to an increase in oil consumption across the region, with significant variation between countries.

OECD Asia-Pacific

Data for the year show that oil demand in OECD Asia-Pacific recorded growth of 0.2 mb/d on an annualized basis, with Japan and South Korea, the area's two largest economies, being the main drivers of oil demand for the region in 2021. They recorded robust economic growth in the fourth quarter of 2021, which supported strong increases in oil demand in most of the region's oil-consuming countries. Looking at the share of oil products in the region's oil demand configuration, jet fuel declined slightly by 12 tb/d y-o-y in 2021, gasoline was broadly unchanged

y-o-y, while diesel demand increased by 34 tb/d y-o-y. In South Korea, strong naphtha consumption from petrochemical companies supported demand growth, which led to an increase in naphtha demand by 0.1 mb/d y-o-y in 2021 for the region.

Non-OECD

China

China's oil demand saw a strong y-o-y rise in 2021, increasing by 1.0 mb/d on the back of continued healthy petrochemical feedstock demand and rebounding mobility. Total oil demand exceeded 2019 levels. The rejuvenation of mobility and easing of some supply chain bottlenecks supported trade-related activities and backed demand for gasoline, which grew by 0.3 mb/d y-o-y. Similarly, diesel was boosted by industrial sector requirements, and grew by 0.1 mb/d y-o-y. The recovery of air traffic in China saw jet fuel post gains of 42 tb/d y-o-y. Residential and industrial sector demand recovery also supported LPG demand, which grew by 0.2 mb/d y-o-y, while naphtha grew by 0.1 mb/d y-o-y in 2021, backed by industrial and petrochemical demand.

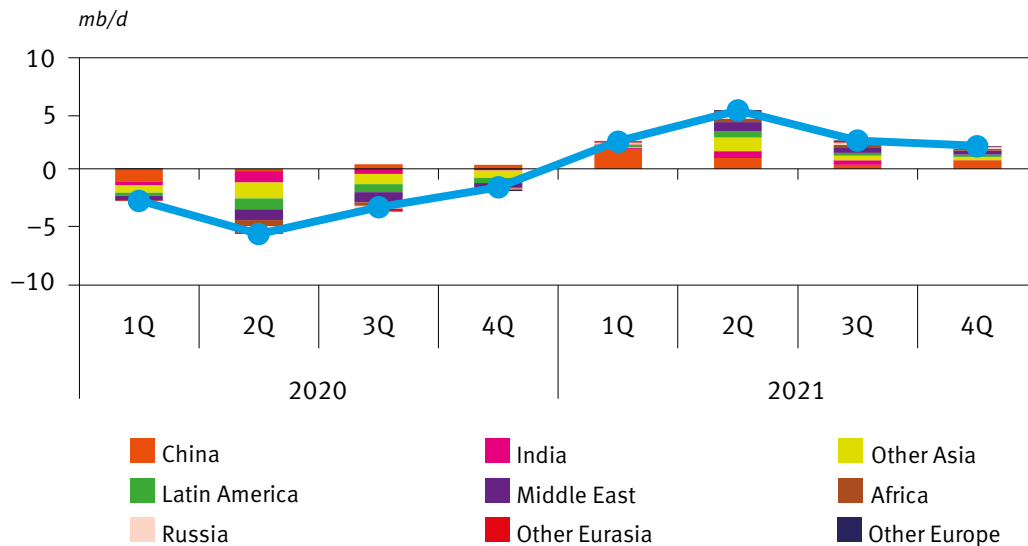
Other Asia – India

Oil demand in India increased by around 0.3 mb/d y-o-y in 2021. Manufacturing sector requirements and the recovery of mobility boosted demand for both diesel and gasoline, which grew by 0.1 mb/d each y-o-y. At the same time, LPG – the main household fuel in India, though continuing to be substituted by kerosene in the residential sector – grew by 18 tb/d y-o-y in 2021.

Latin America

Oil demand in Latin America rose by 0.3 mb/d y-o-y in 2021. Mobility-driven gains in

Figure 6

Non-OECD oil consumption by region and quarter, y-o-y growth, 2020–2021

Source
OPEC.

gasoline saw the product grow by 0.1 mb/d y-o-y. Diesel was supported by industrial and agricultural sector-related activities and thus grew by 0.1 mb/d y-o-y. However, jet/kerosene, which witnessed weak annual growth of 25 tb/d y-o-y, was still affected by a slow recovery in air traffic activity in the region. Finally, LPG saw growth of 10 tb/d. In general, oil demand in the region remained on a positive trajectory, supported by good performance in transportation and industrial fuels.

Middle East

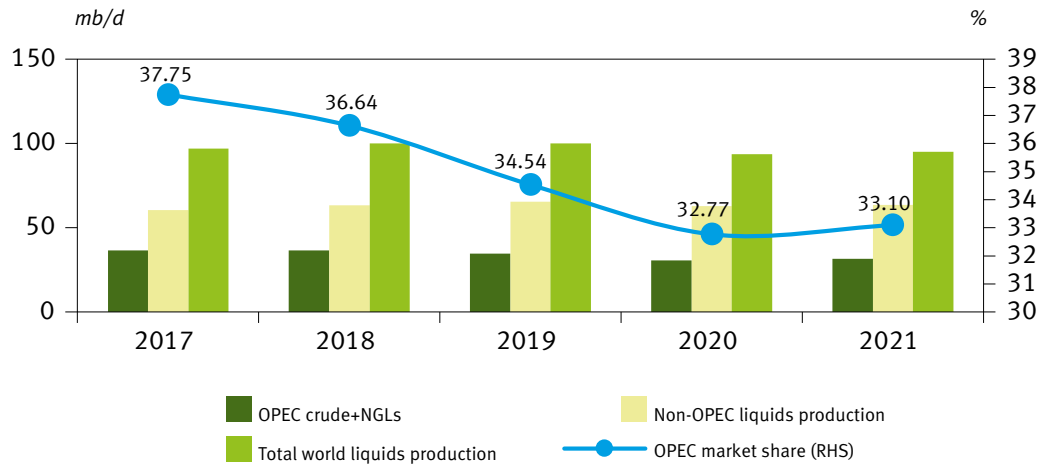
In the Middle East, 2021 data show annual growth of 0.4 mb/d, exceeding overall demand levels compared with before the outbreak of the pandemic. Strong economic recoveries saw some countries' non-oil GDP even exceed pre-pandemic levels; these developments supported effective domestic

demand and spending on major projects. Furthermore, the ongoing recovery in mobility and industrial activities supported demand for gasoline and diesel gasoil in the region. Gasoline grew by 0.2 mb/d y-o-y. Industrial sector and construction-related activities backed demand for diesel, which grew by 0.1 mb/d in the region. Demand for jet/kerosene continued to recover in response to the resumption of air traffic, particularly international air travel in the region, leading to growth of 58 tb/d y-o-y in 2021.

World oil supply in 2021

According to preliminary estimates, the world's liquids supply rose by 1.39 mb/d to average 95.06 mb/d in 2021. OPEC crude production increased by 0.67 mb/d y-o-y to average 26.32 mb/d. Due to higher oil prices and a partial return of global oil demand, mainly caused by

Figure 7
OPEC¹, non-OPEC² and total world supply, as well as OPEC market share, 2017–2021



Notes

¹ OPEC – including OPEC NGLs+non-conventional oils.

² Non-OPEC – including processing gains.

Source

OPEC.

higher COVID-19 vaccination rates and less fear regarding its new variants, liquids output from non-OPEC producers rose by 0.61 mb/d. The non-OPEC countries showing the largest liquids supply declines in 2021 were the UK, Brazil and Colombia, while oil production increases were seen primarily in Canada, Russia, the USA and China.

OPEC natural gas liquids (NGLs) and unconventional liquids output averaged 5.14 mb/d, representing growth of 0.1 mb/d, y-o-y.

Non-OPEC countries produced an average of 63.58 mb/d of liquids, including processing gains, indicating a rise of 0.61 mb/d in 2021. In terms of breakdown, non-OPEC countries produced 43.29 mb/d of crude oil (–0.16 mb/d y-o-y), 11.55 mb/d of NGLs (+0.27 mb/d y-o-y) and 6.47 mb/d of unconventional liquids (+0.4 mb/d y-o-y). Processing improved by 0.13 mb/d to average 2.28 mb/d in 2021.

Non-OPEC supply

Non-OPEC liquids supply averaged 63.58 mb/d in 2021, an increase of 0.61 mb/d over the previous year. Supply increased in OECD Americas (0.48 mb/d), mainly in Canada (0.31 mb/d) and the USA (0.15 mb/d), along with Russia (0.2 mb/d), China (0.14 mb/d) and Guyana (0.04 mb/d). In contrast, a supply drop was driven by OECD Europe (–0.12 mb/d), Other Asia (–0.09 mb/d), Latin America (–0.08), Africa (–0.07 mb/d), OECD Asia-Pacific (–0.02) and India (–0.01 mb/d).

OECD Americas

OECD Americas’ liquids production in 2021 is estimated to have grown by 0.48 mb/d to average 25.17 mb/d.

Canada’s supply rose by 0.31 mb/d y-o-y to 5.48 mb/d, followed by the US, with a

0.15 mb/d y-o-y increase to 17.76 mb/d. US crude oil production in 2021 is estimated to have declined by 0.15 mb/d to average 11.14 mb/d. Production from the GoM is estimated to have increased by 0.15 mb/d to average 1.8 mb/d, and onshore conventional crude is estimated to have declined by 0.19 mb/d to average 2.06 mb/d, largely due to the continued shut-in of stripper wells and yearly decline rate. The latest estimation for tight crude production in 2021 shows a contraction of 0.11 mb/d y-o-y to average 7.28 mb/d. US NGLs production in 2021 showed growth of 0.28 mb/d y-o-y to average 5.45 mb/d, of which 4.35 mb/d comes from unconventional NGLs. Finally, unconventional liquids, mainly ethanol, are likely to have risen by 0.03 mb/d to average 1.18 mb/d.

OECD Europe

OECD Europe's liquids supply experienced the largest decline among OECD regions in 2021 by -0.12 mb/d to 3.77 mb/d.

Lower oil production in the UK was the main reason for a decline in 2021. UK's oil supply in 2021 is now estimated to have decreased by 0.16 mb/d to average 0.91 mb/d. However, Norway's 2021 oil supply saw an increase of 0.03 mb/d to average 2.03 mb/d.

OECD Asia-Pacific

In OECD Asia-Pacific, liquids production is estimated to have declined by 0.02 mb/d y-o-y, to average 0.5 mb/d in 2021, compared with no considerable growth y-o-y in 2019.

Non-OECD

Non-OECD liquids production for 2021 is estimated to have increased by 0.15 mb/d y-o-y to average 31.85 mb/d. China's liquids supply is estimated to have grown by 0.14 mb/d y-o-y to average 4.30 mb/d. The impact of COVID-19 lockdowns and consequent

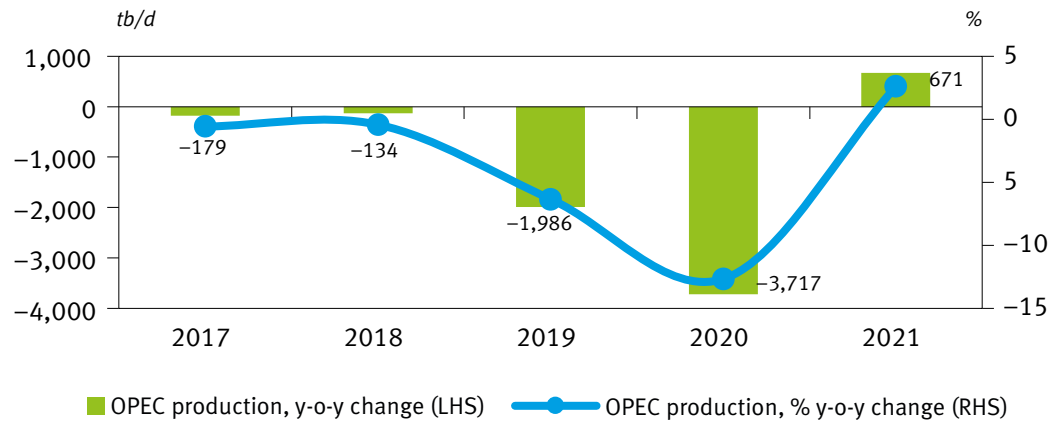
lower demand dampened India's crude oil production in 2021, with output estimated to have contracted slightly by 0.01 mb/d y-o-y to average 0.75 mb/d.

Oil production in Other Asia is estimated to have declined by 0.09 mb/d to average 2.42 mb/d, with the steepest yearly decline seen in Indonesia, Malaysia and Vietnam by 40 tb/d, 30 tb/d and 10 tb/d, respectively. Meanwhile, Latin America is estimated to have also declined by 0.08 mb/d y-o-y, with growth in Argentina and Guyana offset by declines in Brazil of 0.08 mb/d, in Colombia of 0.04 mb/d, and in Ecuador of 0.01 mb/d, mainly due to the shutting-in of wells in costly oil fields and deferring of offshore projects, to average 5.96 mb/d. Oil production in the Middle East is estimated to have risen by 0.05 mb/d y-o-y to average 3.24 mb/d, while Africa's production is estimated to have declined by 0.07 mb/d y-o-y to average 1.34 mb/d. Russia's liquids supply is estimated to have grown by 0.2 mb/d y-o-y to average 10.8 mb/d. Oil production in other Eurasia is estimated to have slightly increased by 0.02 mb/d y-o-y to average 2.93 mb/d.

OPEC crude oil production

According to secondary sources, OPEC crude oil production averaged 26.32 mb/d in 2021, an increase of 0.67 mb/d over the previous year. Y-o-y, production for the year decreased in Nigeria by 0.20 mb/d, Angola by 0.14 mb/d, Saudi Arabia by 0.09 mb/d, the United Arab Emirates by 0.08 mb/d, Congo by 0.02 mb/d, Iraq by 0.02 mb/d, Kuwait by 0.02 mb/d, Equatorial Guinea by 0.01 mb/d and Gabon by 0.01 mb/d. Meanwhile, 2021 production increased in Libya by 0.78 mb/d, IR Iran by 0.42 mb/d, Venezuela by 0.06 mb/d and

Figure 8
Year-on-year percentage change in OPEC production, 2017–2021



Source
OPEC.

Table 2
OPEC crude oil production based on secondary sources, 2017–2021 (tb/d)

	2017	2018	2019	2020	1Q21	2Q21	3Q21	4Q21	2021	Change 2021/20
Algeria	1,047	1,042	1,022	897	870	886	922	955	908	11
Angola	1,634	1,505	1,398	1,255	1,141	1,109	1,106	1,124	1,120	-135
Congo	252	318	324	288	271	261	258	265	264	-25
Equatorial Guinea	133	125	118	115	106	106	99	89	100	-15
Gabon	200	191	215	195	185	186	186	188	186	-8
IR Iran	3,813	3,553	2,356	1,988	2,218	2,440	2,480	2,480	2,405	417
Iraq	4,446	4,550	4,678	4,049	3,881	3,940	4,053	4,219	4,024	-24
Kuwait	2,708	2,745	2,687	2,430	2,328	2,356	2,445	2,528	2,415	-15
Libya	811	951	1,097	367	1,175	1,151	1,154	1,114	1,148	781
Nigeria	1,658	1,719	1,786	1,579	1,413	1,424	1,349	1,335	1,380	-199
Saudi Arabia	9,954	10,311	9,794	9,182	8,445	8,502	9,536	9,862	9,091	-91
UAE	2,916	2,986	3,094	2,802	2,610	2,644	2,762	2,853	2,718	-84
Venezuela	1,912	1,354	796	500	512	513	538	667	558	58
Total OPEC	31,484	31,351	29,365	25,648	25,154	25,520	26,886	27,681	26,319	671

Note
Totals may not add up due to independent rounding.

Table 3

OPEC crude oil production based on direct communication, 2017–2021 (tb/d)

	2017	2018	2019	2020	1Q21	2Q21	3Q21	4Q21	2021	Change 2021/20
Algeria	1,059	1,040	1,023	899	874	886	924	958	911	12
Angola	1,632	1,473	1,373	1,271	1,136	1,125	1,114	1,122	1,124	-147
Congo	263	323	329	300	276	265	266	260	267	-33
Equatorial Guinea	129	120	110	114	104	99	94	79	94	-20
Gabon	210	193	218	207	183	179	180	183	181	-26
IR Iran	3,867	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Iraq	4,469	4,410	4,576	3,997	3,846	3,890	3,979	4,167	3,971	-25
Kuwait	2,704	2,737	2,678	2,438	2,327	2,355	2,447	2,528	2,415	-23
Libya	n/a	n/a	n/a	389	1,214	1,213	1,220	1,182	1,207	818
Nigeria	1,536	1,602	1,737	1,493	1,404	1,343	1,270	1,233	1,312	-181
Saudi Arabia	9,959	10,317	9,808	9,213	8,473	8,535	9,565	9,905	9,125	-88
UAE	2,967	3,008	3,058	2,779	2,610	2,645	2,758	2,854	2,718	-61
Venezuela	2,035	1,510	1,013	569	533	556	635	817	636	67
Total OPEC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note

Totals may not add up due to independent rounding.

Sources

Direct communications.

Algeria by 0.01 mb/d. OPEC's share of the global liquids supply in 2021 increased by 0.3 pp to 33.10%, from 32.77% in 2020.

OPEC NGLs and non-conventional oil

OPEC NGLs and non-conventional oil are estimated to have averaged 5.14 mb/d in 2021, including 5.04 mb/d of NGLs and 0.11 mb/d of non-conventional oil, representing an annual rise of 0.1 mb/d.

Transportation

The long-expected year-end recovery in dirty tanker spot freight rates failed to materialize, as lockdowns and softer Chinese buying limited tonnage demand. As a result, average very large crude carrier (VLCC) and Suezmax spot

freight rates in 2021 witnessed their worst performance going back more than a decade, while Aframax rates marked an eight-year low.

In 2021, the tanker market faced the formidable task of navigating the resulting impacts of a collapse in demand in 2020 associated with the outbreak of the COVID-19 pandemic. Record-high inventories across the globe weighed on demand for tankers, while the global fleet continued to grow, extending the time needed to return the market to balance.

Clarkson data clearly illustrates the extent of the challenge facing the tanker market. Demand for Suezmax and Aframax tankers recovered some of the losses seen in 2020, up 1% and 2% y-o-y, respectively. However, compared with pre-pandemic levels in 2019, demand was still down by 8% and 7%,

respectively. The VLCC market fared worse, as tanker demand declined further in 2021, down by 5% to 12% below 2019 levels.

Meanwhile, tanker supply continued to grow, as orders made in better times materialized. By the end of 2021, the VLCC supply was 6% higher than in 2019 and the Suezmax fleet was 5% higher. The Aframax fleet, however, saw a 1% decline from 2019 levels.

Clean tanker spot freight rates remained stable at low levels, with rates in the Atlantic Basin performing better than East of Suez. Market fundamentals were largely supportive, with product tanker demand recovering from the decline seen the year before, while product tanker supply growth stayed relatively muted.

Oil trade

Major trends in 2021

Crude and product trade flows continued to be impacted by turbulent developments from the previous year, when the outbreak of COVID-19 led to a collapse in demand and severe imbalance in the market. Resulting high inventory levels weighed on crude trade flows, while measures to combat the pandemic's various waves limited demand for crude and products. US trade flows provided good support for the market, with crude imports increasing and exports remaining stable. China's trade flows moderated over the year, with crude imports experiencing the first y-o-y decline since 2001, as government efforts to restructure the refining industry and combat commodity price inflation created limitations. Meanwhile, India's flows were strongly impacted by lockdown measures to combat the pandemic, which weighed on imports in the summer and again in October. Japan's crude imports were volatile due in part to uncertainty related to the Tokyo Olympics.

US

Based on preliminary figures for December, US crude imports in 2021 averaged 6.1 mb/d, representing an increase of around 4%, or 0.2 mb/d, compared with the previous year. Higher inflows for the year were due to weather-related supply disruptions from a cold snap at the start of the year and during the hurricane season, as well as rising domestic needs, with US demand providing an important source of support for the market in 2021. Meanwhile, US crude exports averaged close to 3 mb/d in 2021, representing a decline of 7%, or close to 0.2 mb/d, compared with the previous year. Lower outflows in 2021 reflect weather-related disruptions, muted demand from export destinations amid recurring lockdowns, as well as efforts by US producers to maintain fiscal discipline at a time of market rebalancing. As a result, net crude imports averaged 3.1 mb/d for the year, compared with 2.7 mb/d in 2020 and 3.8 mb/d in 2019. On the product side, product imports averaged 2.4 mb/d in 2021, representing a gain of 0.4 mb/d, or 19%, over 2020. This increase, which came from a broad range of sources, was driven by improving economic activity, which lifted demand. Inflows were also supported by disruptions such as weather-related outages impacting the refining complex on the US Gulf Coast and a cyberattack on the Colonial Pipeline in May. Product exports in 2021 were 0.3 mb/d, or about 6%, higher y-o-y, averaging 5.6 mb/d. The increase reflected improving y-o-y demand for US product exports from Latin America and Asia, particularly China and Mexico.

China

China's crude imports averaged 10.3 mb/d in 2021, down by around 5% from

inflated 2020 levels, when Chinese buyers snapped up excess volumes in the market, and the first y-o-y decline seen since 2001. Last year, scrutiny by the independent refining sector and government efforts to dampen upward price pressure on commodities in general, as well as the ability of refiners to draw on high inventories, curtailed crude imports. On the product side, imports rose by 8% or 0.1 mb/d compared with the year before, averaging 1.43 mb/d. This even exceeded pre-COVID levels of 1.39 mb/d in 2019. Gains over the previous year were driven primarily by LPG and to a lesser degree fuel oil, which offset declines in jet fuel and other major categories. Product exports fell marginally in 2021, averaging 1.3 mb/d, representing a decline of 3%, or 35 tb/d, as exports declined considerably over the second half of the year, amid government efforts to curtail excess product exports. As a result, China returned to being a net product importer, bringing in 0.1 mb/d, after two years as a net exporter with net outflows of 0.2 mb/d in 2020 and just under 0.1 mb/d in 2019.

India

India's crude imports increased by 5% or 0.2 mb/d over the previous year to average 4.2 mb/d in 2021. This was still below 2019 pre-COVID levels of 4.5 mb/d. Crude inflows saw a strong start to the year, but declined rather steadily through to July amid efforts to combat the Delta COVID-19 variant, then generally increased in the second half to hit a high for the year in December. On the product side, imports in 2021 declined by 3% compared with the previous year to average 1.0 mb/d. This was still 5% above 2019 imports, which averaged just under 1.0 mb/d. The decline in 2021 was driven by gasoil and to a lesser extent gasoline and naphtha, which

offset higher LPG inflows. Meanwhile, product exports averaged 1.3 mb/d in 2021, representing a gain of 6% over the previous year. However, product exports were still below the 1.4 mb/d recorded in 2019. All major products contributed to the increase in flows.

Japan

Japan's crude imports averaged 2.5 mb/d in 2021, a slight 1% increase over the previous year and still well below pre-COVID levels of 3.0 mb/d in 2019. Crude flows into Japan were impacted by efforts to host the Olympics during a pandemic. Imports were particularly weak over the summer as authorities implemented country-wide restrictions to combat COVID-19 and limited spectators during the games. On the product side, imports averaged 1.0 mb/d, representing an increase of 93 tb/d or 10% over the previous year and exceeding pre-COVID levels. Gains were seen across all major products and came as refiners preferred to import required products rather than manage excess inventories. On the export side, product inflows rose by 4% in 2021, although remaining below 2019 levels. Gains were seen in all major products except fuel oil, which declined by 9%.

Refinery industry

US

Product markets in the US exhibited positive performance for most of 1H21, as refinery margins were mostly on an upward trend. A sharp drop in temperatures in mid-February prompted plant shutdowns and affected nearly one-third, or 6.0 mb/d, of US oil refining capacity. Although most of the affected refineries recovered during the same month, product inventory levels declined, particularly for gasoline. This was exacerbated by

spring peak maintenance season, while at the same time mobility indicators improved, as the demand contraction brought about by the pandemic started to diminish. However, at the end of 1H21, refining margins trended downward as total US refinery intakes increased after overcoming a series of events that constrained them over the previous months. With the worst of the pandemic-induced demand contraction, Gulf Coast freeze, Colonial pipeline shutdown, spring floods and major turnaround season in the rear-view mirror, higher utilization rates and rising crude prices in June weighed on product crack spreads and refining economics.

In 2H21, US refinery margins rebounded from the dip seen in June as transport fuel consumption levels continued to improve over the summer season. In addition, hurricane-related refinery outages in August, followed by peak autumn maintenance season, led to reduced product output which, combined with strong and continuing improvements in mobility over summer, drove US refining economics upward for most of 2H21, despite some weakness in November, as refineries ramped up their processing rates following heavy turnaround.

In 4Q21, robust performance in the middle section of the barrel provided the most support to US refining economics, while gasoline crack spreads stepped down from post-pandemic highs witnessed in August. The increasingly tighter gasoil and jet fuel balance allowed middle distillates to end the year on notably high levels, despite weaker gasoline and fuel oil performance due to seasonality. Consequently, margins ended the year strong, as in October they exhibited the highest level seen in two years, at \$16.89/b. For 2021, refinery margins averaged \$13.54/b, showing a \$5.60 rise y-o-y.

Europe

In Europe, refining margins were essentially flat during the first few months of the year, as strict COVID-19 mobility restrictions suppressed fuel consumption and ultimately fuel crack spreads. In 2Q21, European product markets benefitted from product output cuts due to major turnarounds. At the same time, relaxation of lockdown measures, as well as a seasonal pick-up in transport fuel demand during the summer season, helped lift margins to slightly higher levels, with most of the positive contribution derived from the top section of the barrel. In addition, strong exports – driven by firm fuel requirements from Africa and a tighter product balance in the US – further added to the upside.

In 3Q21, product markets strengthened further, driven by strong product demand, growing product tightness in the region, as well as a decline in product output due to maintenance work at several refineries. In 3Q21, refinery margins in Europe peaked at \$3.27/b on a quarterly basis, as they surged in October and reached \$5.90/b in response to a contraction in fuel availability. Record high natural gas prices in Europe were reported to have affected European refineries adversely due to higher power costs, as a vast majority of European refiners depend on natural gas for power supply. This likely capped the upside in refining economics.

During the last quarter of the year, refinery margins weakened slightly quarter-on-quarter, with summer seasonal support vanishing, but remained at healthy levels as growing product tightness led gasoil to outperform all other products across the barrel and helped end-of-the-year margins rise above the usual seasonal lows.

For 2021, European refinery margins averaged \$2.95/b, which was up by 79¢ compared with the previous year.

Asia

Asian refining economics in 1H21 remained steady hovering around \$2.0/b, on the back of positive manufacturing and industrial support within the region, as Asian economies continued to show strong activity following pandemic disruptions seen the previous year. In June, increased product availability, as well as rising crude prices, exerted pressure on product crack spreads in the region, despite stronger product fundamentals in India. In 3Q21, Asian margins showed higher gains, backed by lower fuel exports from China, which kept the product surplus in the region relatively constrained and helped limit excess product build-up. This stimulated robust performance, mainly in the middle and bottom sections of the barrel, amid recovering industrial activity, while COVID-19 restrictions eased and demand for fuel oil for the power generation sector rose on the back of high gas and coal prices. During the last quarter of the year, refining margins declined in November, as refinery intake in the region rose significantly, and mobility indicators in India eased. Moreover, China's daily crude oil throughput was reported to have rebounded in October from its lowest level in more than a year, as refiners there ramped up operations in response to the energy crisis amid soaring fuel prices and strong product demand. Nonetheless, Asian margins in 4Q21 managed to retain most of the gains achieved throughout the previous quarters, ending the year at healthy levels. Refinery margins in Asia averaged \$2.89/b in 2021, up by \$2.84 y-o-y.

Stock movements

OECD

OECD stocks

Total OECD inventories – including commercial and government stocks – fell by 368 mb at the end of 2021 from the same time the previous year to stand at 4,209 mb. This stock draw was attributed to a drop in OECD commercial oil inventories and OECD strategic petroleum reserves (SPR), which decreased by 311 mb to 2,715 mb and 57 mb to 1,484 mb, respectively.

On a regional basis, stocks in OECD North America fell by 157 mb, while OECD Europe and OECD Asia-Pacific stocks fell by 171 mb and 40 mb, respectively. On a quarterly basis, total OECD inventories experienced a stock draw of 110 mb and 65 mb in the first and second quarters, respectively. Meanwhile the third and fourth quarters witnessed stock draws of 130 mb and 63 mb, respectively.

The first and second quarters of 2021 saw a drop in total commercial stocks of 114 mb and 42 mb, respectively. At the same time, the third and fourth quarters experienced stock draws of 120 mb and 35 mb, respectively.

At the end of 2021, OECD commercial stocks finished the year 210 mb below the latest five-year average and 201 mb lower than the 2015–2019 average. The stock draw was driven by improvements in world oil demand as well as production adjustments by countries participating in the DoC.

Within the OECD region, commercial stocks in OECD Americas and OECD Asia-Pacific saw a deficit of 55 mb and 56 mb below the latest five-year average by the end of 2021, while OECD Europe saw a larger deficit of 99 mb below the latest five-year average.

Within components, OECD commercial crude and product stocks witnessed stock draws of 147 mb and 164 mb, respectively, at the end of 2021, compared with the previous year at the same time. Crude stocks stood at 99 mb below the latest five-year average, while product stocks witnessed a deficit of around 111 mb compared with the 2016–2020 average. Gasoline indicated a deficit of 24 mb below the latest five-year average, while middle distillates witnessed a larger deficit of around 73 mb lower than the latest five-year average.

Days of forward cover

In terms of days of forward cover, OECD commercial stocks stood at 61.1 days at the end of 2021, 10.6 days lower than 12 months before, 2.9 days below the latest five-year average and 1.3 days lower than the 2015–2019 average. OECD Americas was 2.0 days below the latest five-year average to stand at 62.0 days at the end of 2021, while OECD Asia-Pacific stood 2.2 days below the latest five-year average to finish the year at 46.7 days. Meanwhile, OECD Europe indicated a deficit of 5.5 days, ending the year at 67.6 days.

Non-OECD

Non-OECD stocks

Estimated total non-OECD stocks – including commercial and SPR – stood at 2,433 mb at the end of 2021, down by 185 mb from the end of 2020. Both crude oil and products experienced stock draws of 75 mb and 110 mb, respectively. Within the regions, China experienced the bulk of the drop, decreasing by 104 mb to stand at 959 mb. Middle East and Other Asia also experienced stock draws

of 22 mb and 19 mb, to stand at 429 mb and 224 mb, respectively.

Balance of supply and demand

World oil demand registered a strong recovery, growing by 5.7 mb/d in 2021 to average 96.6 mb/d. The OECD and non-OECD saw growth of 2.6 mb/d and 3.1 mb/d, respectively.

Meanwhile, non-OPEC supply in 2021 also experienced an improvement, increasing by 0.6 mb/d to average 63.6 mb/d, while OPEC NGLs and non-conventional oil rose by 0.1 mb/d to stand at 5.1 mb/d in 2021.

Based on current supply/demand figures, demand for OPEC crude in 2021 is estimated to have increased by 5.0 mb/d y-o-y to average 27.9 mb/d. Projected demand for OPEC crude saw a downward revision of 2.1 mb/d since the initial forecast, as world oil demand was revised down by 1.1 mb/d and non-OPEC supply was revised up by 1.0 mb/d.

On a quarterly basis, required OPEC crude in 2021 stood at 26.2 mb/d and 27.0 mb/d in the first and second quarters, respectively, and 28.7 mb and 29.6 mb/d in the third and fourth quarters, respectively.

Meanwhile, according to secondary sources, OPEC crude production averaged 25.2 mb/d in 1Q21, which was 1.1 mb/d lower than the demand for OPEC crude. In 2Q21, OPEC crude production averaged 25.5 mb/d, which was 1.5 mb/d less than the demand for OPEC crude, while in 3Q20, it averaged 26.9 mb/d – 1.8 mb/d below the required amount of crude. In the meantime, OPEC crude production averaged 27.7 mb/d in 4Q21, which was 2.0 mb/d below the demand for OPEC crude. For the whole year, OPEC production averaged 26.3 mb/d, around 1.6 mb/d lower than demand for OPEC crude.

Table 4
World oil demand and supply balance, 2018–2021

	2018	2019	2020	1Q21	2Q21	3Q21	4Q21	2021
World oil demand and supply balance								
World demand (mb/d)								
Americas	25.41	25.47	22.44	22.73	24.33	24.74	24.89	24.19
of which US	20.60	20.65	18.35	18.65	20.21	20.39	20.56	19.96
Europe	14.31	14.31	12.43	11.91	12.63	13.84	13.64	13.02
Asia-Pacific	8.01	7.93	7.14	7.67	7.04	7.11	7.72	7.39
Total OECD	47.73	47.72	42.02	42.31	44.00	45.70	46.26	44.59
China	13.01	13.65	13.52	13.79	14.55	14.52	15.21	14.52
India	4.93	4.99	4.51	4.94	4.50	4.59	5.12	4.79
Other Asia	8.91	9.06	8.13	8.56	8.98	8.34	8.62	8.63
Latin America	6.53	6.59	6.01	6.25	6.16	6.46	6.35	6.30
Middle East	8.13	8.20	7.55	7.95	7.77	8.24	7.99	7.99
Africa	4.33	4.35	4.08	4.37	4.08	4.15	4.40	4.25
Eurasia	3.55	3.57	3.39	3.65	3.42	3.63	3.76	3.61
of which Russia	1.21	1.19	1.07	1.23	1.24	1.09	1.28	1.21
of which other Eurasia	0.74	0.76	0.70	0.78	0.72	0.73	0.79	0.75
Total non-OECD	51.34	52.38	48.96	51.52	51.43	51.74	53.52	52.06
(a) Total world demand	99.07	100.10	90.97	93.83	95.43	97.44	99.77	96.65
Y-o-y change	1.40	1.03	-9.12	-0.71	11.82	6.00	5.51	5.67
Non-OPEC liquids production								
Americas	24.03	25.81	24.70	24.10	25.17	25.20	26.21	25.17
of which US	16.66	18.47	17.61	16.63	17.93	17.85	18.61	17.76
Europe	3.84	3.71	3.90	3.96	3.52	3.81	3.81	3.77
Asia-Pacific	0.41	0.52	0.52	0.50	0.45	0.53	0.53	0.50
Total OECD	28.28	30.04	29.12	28.56	29.13	29.54	30.55	29.45
China	3.98	4.05	4.16	4.30	4.34	4.33	4.25	4.30
India	0.86	0.82	0.77	0.76	0.75	0.75	0.74	0.75
Other Asia	2.73	2.69	2.51	2.52	2.46	2.33	2.36	2.42
Latin America	5.79	6.08	6.04	5.94	5.97	6.09	5.82	5.96
Middle East	3.19	3.19	3.19	3.22	3.23	3.24	3.27	3.24
Africa	1.49	1.51	1.41	1.37	1.35	1.32	1.32	1.34
Eurasia	11.52	11.61	10.59	10.47	10.74	10.81	11.16	10.80
of which Russia	3.08	3.07	2.91	2.96	2.89	2.79	3.08	2.93
of which other Eurasia	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11
Total non-OECD	32.75	33.14	31.71	31.65	31.85	31.77	32.13	31.85
Total non-OPEC production	61.03	63.19	60.82	60.21	60.98	61.32	62.68	61.30
Processing gains	2.34	2.36	2.15	2.28	2.28	2.28	2.28	2.28
Total non-OPEC liquids production	63.37	65.55	62.97	62.49	63.26	63.60	64.96	63.58
OPEC NGL + non-conventional oils	5.29	5.21	5.05	5.10	5.12	5.17	5.18	5.14
(b) Total non-OPEC liquids production and OPEC	68.66	70.76	68.02	67.59	68.38	68.77	70.14	68.73
Y-o-y change	3.05	2.10	-2.74	-4.56	2.18	2.20	2.96	0.71
OPEC crude oil production (secondary sources)	31.35	29.36	25.65	25.15	25.52	26.89	27.68	26.32
Total liquids production	100.01	100.13	93.67	92.75	93.90	95.66	97.82	95.05
Balance (stock change and miscellaneous)	0.94	0.03	2.69	-1.08	-1.53	-1.79	-1.96	-1.60
OECD closing stock levels (mb)								
Commercial	2,873	2,896	3,035	2,921	2,879	2,759	2,725	2,725
SPR	1,552	1,535	1,541	1,546	1,524	1,513	1,485	1,485
Total	4,425	4,432	4,577	4,467	4,402	4,272	4,209	4,209
Oil-on-water	1,058	1,033	1,148	1,138	1,131	1,169	1,201	1,201
Days of forward consumption in OECD (days)								
Commercial onland stocks	60	69	68	66	63	60	61	59
SPR	33	37	35	35	33	33	33	32
Total	93	105	103	102	96	92	94	91
Memo items								
(a) – (b)	30.41	29.34	22.95	26.23	27.05	28.67	29.63	27.92

Note

Totals may not add up due to independent rounding.

Source

OPEC.



**Declaration of Cooperation
Reaches Five-year Milestone**

OPEC marked a huge milestone on 10 December 2021 – the 5th anniversary of the Declaration of Cooperation (DoC).

Five years earlier, on the last day of November, OPEC Members called on non-OPEC oil-producing nations to join an initiative to cooperate on a regular basis to support oil market stability, highlighting the key role that non-OPEC producers can play in achieving



this all-important objective. They additionally adopted oil production adjustments and established a high-level ministerial monitoring committee to review the implementation of these decisions.

Downturn of 2014–2016

The repercussions of the downturn which started in mid-2014 were being felt throughout the entire international oil and gas sector by producers, consumers and investors alike by the beginning of 2016. It was marked by a dramatic market decline, with the OPEC Basket seeing the largest percentage fall in the six market cycles observed over the past four decades up to that time between June 2014 and January 2016. Supply outpaced demand, which in turn led to a sharp build in global

inventories. The international oil sector was struggling to find equilibrium, making it the longest down cycle in OPEC’s history.

Over the course of 2016, OECD commercial oil stock levels fell somewhat but remained more than 300 million barrels over the five-year average. There was a dramatic rise in non-OECD inventories, along with expansion in some non-OECD strategic petroleum reserves. The industry struggled under weighty pressure.

Oil-exporting countries and oil companies saw their revenues cut in half or worse, putting strain on their fiscal position and hindering their economic growth. The reverberations of this price shock also strongly affected the world economy. Many thousands of oil workers found themselves unemployed, and investment ceased, threatening future supply. In both 2015 and 2016, a dramatic contraction in oil industry investment led to combined spending for oil and gas exploration and production falling by more than \$300 billion over the two years – 26% per year, respectively.

Taking the helm of OPEC in the summer of 2016, OPEC Secretary General, Mohammad Sanusi Barkindo, ranged far and wide to find consensus, later termed “shuttle diplomacy”.

The ‘Algiers Accord’ was reached at the Meeting of the OPEC Conference, which convened in Algiers, Algeria, on September 28, 2016. The landmark move, announced at the 170th (Extraordinary) Ministerial Meeting, followed concern about a continuing crude oversupply and high oil inventories and the need to speed up the market’s rebalancing.

The Extraordinary Conference, which followed a Consultative Meeting attended by Heads of Delegation from the Organization’s 14 Member Countries, decided to opt for an OPEC-14 oil production target ranging

between 32.5 and 33.0 million barrels per day (mb/d), in order to accelerate the ongoing drawdown of the stock overhang and bring the rebalancing forward. The Ministers' talks were held at the end of the three-day 15th Ministerial Meeting of the International Energy Forum.

The historic 'Algiers Agreement' most certainly reflected a consensus among Member Countries and signalled an important shift in attitudes. It was the first such OPEC agreement since the Oran, Algeria, decision of 2008 and reflected a broad recognition of the realities of the market of the day. The 'Algiers Accord' was roundly welcomed by many stakeholders.

The 'Vienna Agreement' signed at the 171st Meeting of the OPEC Conference in

Vienna on 30 November 2016, followed. It constitutes an historic moment in the history of the oil industry, as well as in international cooperation and multilateralism, as it led to the institutionalization of a global framework that not only helped the oil industry immediately, but also years later when the COVID-19 pandemic broke out in 2020 and caused a severe oil market contraction. OPEC agreed to adjust production by 1.2 mb/d from 1 January 2017.

These efforts were carried out to help restore stability in the global oil market for the benefit of all producers, consumers and investors, as well as the global economy. They additionally underpinned the Organization's views on the importance of multilateralism, international cooperation and dialogue.

On 10 December 2016, the 1st OPEC and non-OPEC Ministerial Meeting was held in Vienna on 10 December 2016: Dr Mohammed Bin Saleh Al-Sada (second r), President of the OPEC Conference and Minister of Energy & Industry, Qatar; Alexander Novak (second l), Minister of Energy of the Russian Federation; Mohammad Sanusi Barkindo (r), OPEC Secretary General; and Eng Mohamed Hamel (l), Algeria's Governor for OPEC, and Chairman of the OPEC Board of Governors.



Ten days later, on 10 December 2016, OPEC Member Countries and Azerbaijan, the Kingdom of Bahrain, Brunei Darussalam, Equatorial Guinea (which later joined OPEC), Kazakhstan, Malaysia, Mexico, the Sultanate of Oman, the Russian Federation, the Republic of Sudan and the Republic of South Sudan gathered in Vienna, Austria, at the OPEC Headquarters to embark on a new era of cooperation to support sustainable stability in the global oil market, under the DoC. The supplementary deal committed to output adjustments of almost 600,000 barrels per day (b/d).

Other producers attended the meeting in support of these extraordinary efforts. The DoC is an unprecedented collaborative framework of leading oil producers that saw the need to come together during a critical juncture in the global oil industry. If it were not for this group of countries and the courageous act that they undertook, the oil sector would, without a doubt, be in a different situation today.

From the very moment the DoC was endorsed by the 24 signatories on 10 December news agencies announced a firm rise in the market, buoyed by a confidence not seen in oil circles since before the summer of 2014.

The adjustment in oil production of around 1.8 mb/d was designed to speed up the rebalancing of the oil market and help reduce the large oil stock overhang, which had been pressuring the market for many months. To ensure conformity with the OPEC-non-OPEC agreement, the two sides set up the Joint Ministerial Monitoring Committee (JMMC). This was comprised of three OPEC Member Countries – Kuwait (Chairman), Algeria and Venezuela, along with two countries from the non-OPEC group – Oman and the Russian Federation – which were to meet periodically to ensure full implementation of the accord.

At its inaugural meeting on 22 January 2017, the JMMC was tasked with presenting a monthly production data report on OPEC Member Countries' crude oil and of participating non-OPEC countries oil liquids production by the 17th of each month; evaluate conformity to respective adjustments; nominate one technical contact person to form a Joint Technical Committee, which would prepare a monthly report for the JMMC and meet on a monthly basis; report to the Conference on the effect of the implementation of the OPEC 171st Ministerial Conference Decision and the DoC on the market.

These decisions helped stabilize the global oil market over the next few years, with a corresponding upward swing in the world economy. DoC members showed strong conformity to their decisions, which boosted market morale and trust in OPEC.

As senior OPEC officials have stressed, the tripartite OPEC agreements reached in 2016 – the 'Algiers' Accord in September, the 'Vienna Agreement' in November, and the DoC in December – took a lot of time, effort and dedication by many devoted individuals to bring to fruition. It all capped a year that will forever go down in OPEC's history as one of its most challenging, yet perhaps most rewarding.

Looking back to 2016, very few believed that the collaborative efforts would grow and evolve into a major, robust cooperative force to help restore much needed stability in the global oil market. However, the 23 oil-producing countries have continued to rise to the challenges they have encountered, including instrumenting effective and visionary policies to combat the devastating impact of the COVID-19 pandemic.

At the 176th Conference, held in Vienna on 1 July 2019, the draft 'Charter of

Cooperation' (CoC) was negotiated with the non-OPEC countries of the DoC. The Conference approved the draft text of the CoC and requested Member Countries take it through their respective national processes. On 2 July the next day, the ten non-OPEC DoC countries unanimously supported the CoC and signed on, building a more permanent platform for cooperation and collaboration on a broader scale of topics.

The CoC created one of history's strongest producer partnerships, spanning the entire world from east to west. It has committed itself to promoting market stability on a sustained and ongoing basis.

COVID-19 pandemic

In response to the severe oil market contraction caused by the COVID-19 pandemic, the DoC's 23 countries adopted the largest-in-size and longest-in-time voluntary oil-production adjustment in the history of OPEC and the oil industry, demonstrating their continued commitment to a stable oil market.

The world had just caught its breath from the 2014–2016 downturn when the COVID-19 pandemic struck. Predictions starting in February went very rapidly from a bad to a worst-case-scenario situation, with oil demand dropping through the floor by up to 30% and sentiment hitting rock bottom in 'Black April'.

Having the DoC already in place, with tried and true experience and the deep connections built over years, meant that its participants had simply to leap to action when the bottom fell out of the market. If there is a silver lining to this human tragedy, it's that it has brought oil market participants closer together. As OPEC reached out to every corner

of the industry, it found that all were eager to share their voices and opinions, to try and battle this worst of situations together.

The dramatic spread of the coronavirus, from a single case in China to a global pandemic in less than three months, forced governments to take drastic measures to protect public health. Besides the toll COVID-19 was taking on people, it also devastated economic growth prospects, with the situation being compared with the 'Dirty 30s', and upended the oil market. The World Health Organization declared the outbreak a pandemic on 11 March 2020.

For the oil market, the period from the 8th OPEC and non-OPEC Ministerial Meeting (ONOMM) to the 9th and 10th (Extraordinary) ONOMMs held between 9–12 April was one of the most tumultuous and chaotic months in the industry's long history. It was a period where market supply and demand fundamentals were continually up-ended. Demand for jet fuel, gasoline and diesel fell sharply; logistical capacity constraints were looming; some production was shut-in; refineries cut production and reduced their crude purchases; some companies were filing for bankruptcy; and there was the growing threat of major job losses. The industry was haemorrhaging and no one was able to stem the bleeding.

No matter the source or who was being interviewed – energy analysts, energy ministers, journalists or experts from academia – there was unanimous agreement that the COVID-19 pandemic transported the world into uncharted territory. In its April World Economic Outlook, subtitled 'The Great Lockdown', the International Monetary Fund forecast the global economy would contract by an estimated 3% in 2020 – worse than during the 2008 and 2009 financial crisis. This

economic destruction, by extension, wreaked havoc on the global oil and gas industry, which was suffering from a massive one-two punch of unprecedented demand destruction and record levels of supply rapidly filling up storage capacity around the world.

Addressing the catastrophic downturn in the oil industry would eventually entail three ‘extraordinary’ meetings, two from the DoC, and one from the G20, of which Saudi Arabia held the rotating presidency in 2020. OPEC and the DoC countries once again rose to the challenge by deciding on both the largest and the longest voluntary production adjustments in history. The 9th (Extraordinary) ONOMM began at 4pm Central European Time on 9 April and ran into the early hours of 10 April. Alongside the follow-up 10th Meeting on 12 April it would prove to be a landmark in the history of OPEC and the DoC, with a number of firsts. In the end, an agreement for record production adjustments, over a period of two years, was in place, with Mexico remaining a stand out.

The 9th and 10th Extraordinary ONOMMs agreed to adjust downwards overall crude oil production by 9.7 mb/d in May and June 2020; from 1 July 2020 to 31 December 2020 by 7.7m b/d; and from 1 January 2021, to 30 April 2022 by 5.8m b/d.

These efforts have supported the global pandemic recovery process, and were recognized at the highest levels of government and by other international organizations and academia.

Throughout 2021, efforts were ongoing to monitor the global oil market closely, with the ONOMM meeting monthly throughout the year and slowly bringing oil back to the market, based on market need, providing a smooth transition from what would have been a catastrophic event for the oil market.

The DoC and CoC clearly show the necessity of multilateral engagement and international cooperation to solve world-scale problems.

OPEC and non-OPEC Ministers during the signing of the Declaration of Cooperation on 10 December 2016.





Secretariat's Activities

Office of the Secretary General

As the second year of the COVID-19 pandemic unfolded, the OPEC Secretary General, Mohammad Sanusi Barkindo, continued to actively participate in numerous international conferences, meetings and events as a keynote speaker and panelist, both online and in-person.

The Secretary General delivered key note speeches to the 6th Iranian Petroleum and Energy Club Congress and Exhibition; the 20th Nigeria Oil and Gas Conference and Exhibition at African Energy Week; XXVI International Conference 'Oil and Gas of Turkmenistan-2021'; GASTECH 2021; India Energy Forum by CERAWEEK; the Nigeria Oil and Gas Conference; Russia Energy Week; the UN Climate Change Conference (COP26); the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC); 11th Gulf Intelligence Global UAE Energy Forum 2021; Atlantic Council Global Energy Centre – Leading Oil & Gas into a Net-Zero World and African Energy Week. Furthermore, the Secretary General undertook missions to OPEC Member Countries, including the Islamic Republic of Iran, the Bolivarian Republic of Venezuela and the Republic of the Congo, and held high-level bilateral meetings with heads of state and heads of delegation to OPEC.

Under the framework of the OPEC Energy Dialogues, the Secretary General participated in a vast spectrum of technical and high-level meetings with key dialogue partners, including China, India, the Russian Federation, as well as the European Union and the Gas Exporting Countries Forum (GECF). The Secretary General, furthermore, participated in events organized by international organizations, such as the 11th IEA-IEF-OPEC Symposium on Energy Outlooks, G24 Ministerial

Meetings and International Monetary Fund/World Bank meetings.

The Office of the Secretary General (SGO) provided technical and administrative support in preparation for all of the above-mentioned engagements of the Secretary General. In addition, the Office coordinated the necessary arrangements for OPEC statutory meetings, such as the OPEC Ministerial Conferences and meetings of the Board of Governors (BoG), including monthly Joint Ministerial Monitoring Committee (JMMC) and OPEC and non-OPEC Ministerial Meetings (ONOMM). After more than two years of online meetings, the Secretariat arranged for a hybrid 159th Meeting of the Board. The SGO coordinated preparations for these meetings, and prepared and distributed reports accordingly to Ministers, Governors and Management. The Office, furthermore, assured required arrangements were made for the Secretary General's participation in Economic Commission Board (ECB) and Joint Technical Committee (JTC) meetings. The Office contributed to the seamless functioning of Secretariat activities (e.g. management meetings), especially under challenging COVID-19 pandemic circumstances.

The Office provided continuous support to the Secretary General in maintaining and enhancing his regular external liaison activities, thus assuring an uninterrupted and coherent communication stream with Member Countries and Participating Countries of the Declaration of Cooperation (DoC).

The Legal Office

In line with its objectives and responsibilities, based on the Long-Term Strategy (LTS) and detailed in the fourth Mid-Term-Programme

(MTP-IV), the Legal Office (LO) contributed to the conduct of the Organization's affairs by promoting the rule of law within the Organization and in its relations with governments, organizations, enterprises and individuals.

As a main deliverable, the LO provided legal advice to the Secretary General and OPEC governing bodies, supervised the Secretariat's legal and contractual affairs, and evaluated legal issues of concern to the Organization, reporting its findings to the Secretary General.

Specifically, the LO's main tasks and accomplishments for the year 2021 were as follows:

Internal legal support

- Provision of legal advice to the Secretary General on various procedural matters regarding the OPEC Conference and the BoG, including support for the President's and Chairman's activities, respectively.
- Close monitoring of Austrian, European and international legal cases relating directly/indirectly to OPEC, including participating in interpretation of relevant articles of the Host Agreement between OPEC and the Republic of Austria, in cooperation with the Austrian Federal Ministry for European and International Affairs, and reporting on this to the Secretary General.
- Support was provided to the Internal Audit function for proper execution of audits planned throughout the year, including support of the BoG Audit Committee.
- Support and legal advice was provided to the BoG Subcommittee on Recruitment Regulations and Policies.
- Following the adoption of an Administrative Instruction for Procurement, Contracts and Payments, aligned with best international organization practices, the LO coordinated its implementation and, in cooperation with all other Departments, Offices and Units (DOUs), designed and deployed a Contracts Management Application to fully encompass the Secretariat's new regulation.
- Multiple contracts and agreements with external entities and individuals were reviewed and guidance in related legal matters was provided to different user departments.
- The LO assisted in accommodating the first Seconded at the Secretariat, revising the model contract from a legal perspective.
- The LO participated in the Audit Committee, Personnel Committee, Contracts Committee, Academic Committee, and 60th Anniversary Organizing Committee, providing legal support for their activities, as established by the Organization's rules and the Secretary General's instructions.
- The LO participated in the Operations Group and Steering Committee of the Long-Term Strategy 2021 review.
- Under the umbrella of the Academic Committee, and together with the City of Vienna, the LO organized the first part of the 1st Vienna Energy Scholarship Programme. Member Countries (MCs) were approached regarding execution of part two of this programme.
- The LO was instrumental in signing and implementing a Memorandum of Understanding with the WU (Vienna University

of Economics and Business) Executive Academy, agreeing to engage in activities of interest for both parties and securing discounted tuition fees for students from OPEC MCs.

- The LO successfully concluded the process of amendment of the OPEC Statute at the 180th Meeting of the Conference, strengthening the immunity of the organization in alignment with international regulations.
- With the year marked again by challenges caused by the COVID-19 pandemic, the LO provided extensive assistance on other DOUs with regard to the implementation of safety measures by the Austrian Government from a legal point of view. The LO designed the legal framework for work from home and other actions during the COVID-19 pandemic, in the form of Administrative Instructions issued by the Secretary General.

Improvement of internal LO work

- The processes of the main activities of the LO are monitored on an ongoing basis, as well as formats for permanent reporting and reviewing of work progress.
- Upon establishing a yearly review of rules and regulations to keep them duly up to date, the LO, with the cooperation and support of the Finance and Human Resources Department (FHRD), commenced and continued with the review of Staff Regulations.
- The LO is continuing to progressively enhance its role in order to become a Legal Operations Support Service, aligned with best practices for the provision of legal services.

Development of cooperation with non-OPEC countries

- Regular legal support was provided for the implementation of the DoC and the operation of its bodies, including ON-OMM, the JMMC and the JTC.
- In close cooperation with the Research Division (RD), the LO prepared a working draft outline of a Charter of Cooperation Work Programme with a focus on environmental matters.

Information and analysis products

- Developments in legal aspects pertaining to the energy sector were monitored and reported, as relevant, to the Secretary General, generally in preparation for the OPEC dialogues.
- Upon the reintroduction of the NOPEC Bill 2021 to the US Senate at the 117th US Congress, LO closely monitored developments and kept the Secretary General and MCs up to date.
- Provided an extensive legal brief analyzing the Dutch Court's ruling in the case MilieuDefensie et al. versus Royal Dutch Shell.
- Provided a summary review of the Anti-Blockade Law of Venezuela to the SG.
- At the SG's request, LO reached out to the OPEC Fund to establish an OPEC-OPEC Fund Working Group to explore and design concrete and long-term collaboration paths between the two organizations.
- In line with the Memorandum of Understanding signed with Energy Bridge Partners LCC, LO provided its strategy paper to Heads of Delegation.
- Following its introduction in 2019, the LO continued to produce a Monthly

Legal Report, comprising relevant legal energy issues for distribution within the OPEC Legal Network of Member Country (MC) lawyers and delegates.

- Intensive research on legal documents and information continued for the creation of an Energy Legal Database on the Secretariat's homepage.
- Extensive assistance was provided to the Seminar Organizing Committee with regard to preparations for the 8th International OPEC Seminar, in particular regarding legal aspects relating to the contract with the Seminar Consultant, with special consideration for the COVID-19 pandemic.
- The LO intensified its cooperation with the IBA Working Group on Regulation of the Energy Transition with the aim to create an instrument to collect regulatory practices around the world and determine guiding principles to ensure a balanced approach to the energy transition.

Training

- The Legal Office organized the 3rd Legal Workshop. Acknowledging the pressing subject of climate change and measures for mitigation, the main theme in 2021 was *Update on National Climate Laws and Jurisprudence Evolution – Emissions Reduction, Energy Access and Energy Security*.

The Workshop was attended by MCs and countries participating in the DoC. It attracted speakers from international law firms, national and international oil companies, energy and service companies and international organizations that focus on challenges and opportu-

nities related to the energy transition from a legal perspective, considering the viewpoint of the fossil fuel extraction business and resource-rich countries.

- In line with its Work Programme, work continued on the design of two training units to be delivered to OPEC MCs and participating countries in the DoC on the topics *Climate Change and Energy Transition*.

Research Division

The Secretariat's RD continued to perform its research activities, tailored to the extraordinary circumstances and uncertainties amid the COVID-19 pandemic and post-pandemic recovery plans, which substantially affected the energy sector, especially the oil industry, and OPEC MCs.

In line with OPEC's third Long-Term Strategy (LTS) and fourth MTP-IV, the RD continued its intensive research programme on energy and related matters. The Work Programme 2021 was implemented in accordance with the requirements of the Organization and its MCs, introducing all necessary adjustments and tailoring activities due to the pandemic.

The RD consists of the following:

- **Petroleum Studies Department (PSD):** monitors, analyses and forecasts oil and product market developments in the short term.
- **Energy Studies Department (ESD):** monitors, analyses and forecasts world energy developments in the medium and long term and coordinates most of the Secretariat's energy dialogue programmes.

- **Data Services Department (DSD):** responsible for the identification, collection and processing of energy-related information in support of the research activities of the OPEC Secretariat and its MCs. DSD also includes OPEC's Information Centre, IT Development Team and the Statistics Team.
- **Environmental Matters Unit (EMU):** focuses on energy-related matters arising from the Paris Agreement and the UN 2030 Agenda for Sustainable Development.

The activities of the RD during 2021 included the following:

- Monitoring of short-term energy market developments and prospects, particularly related to the oil market, which was recovering from the COVID-19 pandemic, and regional setbacks due to new virus variants causing renewed lockdowns and mobility restriction measures (PSD, DSD).
- Conducting comprehensive energy market analysis and forecasts for the medium and long term, with an emphasis on the outlook for demand and supply – particularly in a post-COVID-19 environment and structurally changing energy landscape – as well as developing long-term oil market scenarios and updating the models required to perform such analysis (ESD, DSD).
- Preparing up-to-date and reliable analysis for the Ministerial Conference, the BoG, the ECB, meetings of the JTC and the JMMC and similar bodies, in addition to energy dialogues, as the basis for energy policy-related decision-making, including identification of the key driving forces behind global, regional, and national oil and energy markets (PSD, ESD, DSD, EMU).
- Undertaking the third review of the OPEC LTS, including the assessment of key challenges and developing scenario analysis to address significant uncertainties with quantified implications (PSD, ESD, DSD, EMU).
- Monitoring of energy policies, important technological developments and dynamic structures in the international energy industry (ESD, EMU).
- Undertaking comprehensive analyses of the most recent developments and emerging trends related to the implementation of the Paris Agreement and the 2030 Agenda (EMU).
- Continuing with proactive engagement in multilateral negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) and the High-level Political Forum (HLPF), while also participating in the High-level Dialogue on Energy (HLDE), (EMU).
- Assessing the outcomes of the UN processes on climate change and sustainable development, considering their impacts on the oil and gas industry, raising awareness among MCs, and assisting them in enhancing their cooperation by agreeing on unified positions on issues of common interest, while also effectively participating in these multilateral and intergovernmental fora (EMU).
- Reviewing the Working Group III (WGIII) contribution to the Sixth Assessment Report (AR6), and actively participating in Intergovernmental Panel on Climate Change (IPCC) sessions, aiming to provide technical support to MCs (EMU).

- Gathering, compiling and dispensing of pertinent up-to-date statistical data and information to provide a reliable basis for the analysis of relevant energy developments (DSD).
- Arranging series of meetings between the secondary sources that are used in deriving monthly average crude oil production volumes and representatives from participating countries in the DoC, with the objective to improve the accuracy of data reporting and contribute to further transparency through the regular exchange of information and dialogue (DSD).
- Developing further information technology (IT) applications, in addition to relevant specialized information and reference services (DSD).
- Maintaining and enhancing the modeling capabilities and the database used to conduct research in the short, medium and long term (ESD, EMU, DSD, PSD).
- Contributing to key Secretariat events, such as celebrations of OPEC at 60 and the OPEC Seminar (PSD, ESD, DSD, EMU).

Flagship publications, regular reports and studies

During 2021, the Division continued its research into energy-related subjects and produced a number of flagship publications, regular reports and specific studies addressing questions related to short-term oil market monitoring and developments, future energy prospects, technology, climate change and policy perspectives in the context of sustainable development.

Daily and weekly reports: Concise and timely summaries of oil market trading news

and analysis were provided, in addition to other relevant headlines directly related to short-term market developments.

Important oil market news related to the COVID-19 pandemic was covered in the daily market report. Specific analysis of its impact on the oil market was discussed in the focus section of the weekly oil market report. In addition to these reports, a weekly COVID-19 report provided a concise overview of the impact of COVID-19 developments on the oil market in the short term.

Furthermore, numerous high-frequency reports on the impact of the COVID-19 pandemic on the world economy, oil demand and supply and global oil inventory levels were prepared throughout the year, in support of stakeholders' decision-making processes.

The OPEC Monthly Oil Market Report (MOMR): The *MOMR* focuses on short-term oil market developments. It is the Organization's most-viewed report and is frequently quoted and referred to by major media outlets, as well as a wide range of respected industry analysts. The *MOMR* contains ten chapters covering a wide range of information pertaining to the oil market, including oil prices and futures markets, commodity markets, the world economy, oil demand and supply, the downstream segment of refining and product markets, transportation, trade, oil inventories and the balance of supply and demand.

The *MOMR's* feature articles provide concise and in-depth analyses of important events and outlooks, focussing on global oil demand, non-OPEC supply, summer and winter product markets, as well as an assessment of timely economic issues. The July *MOMR* and its feature article presented new forecasts for the economy, world oil demand and non-OPEC supply for the following year. In addition, feature articles reviewed crude

and product prices and provided an assessment of global oil inventories, as a direct result of the difference between global oil supply and total world oil demand.

The November 2021 *MOMR* had the highest number of views on the OPEC website, with 31,757 views. For the year, website views averaged 24,884 per monthly issue.

The *MOMR* video continued to be produced each month in 2021, and was uploaded to the OPEC website at the time of report publication, highlighting the key changes from the previous month's forecasts. The *MOMR* App, which was also updated with each publication of the report, presented a concise and comprehensive overview of the key messages of reports, enhanced and supported by graphs and tables containing the latest relevant data sets. The *MOMR* App can be downloaded free of charge from any play store.

The 15th edition of the *World Oil Outlook* (*WOO* 2021) highlights future developments in the oil and energy scene, as well as identifying the main challenges and opportunities facing the oil industry in the years to come. The 2021 version of the *WOO* presented a comprehensive outlook for oil demand and supply, and the downstream for the medium (2020–2026) and long term (2020–2045).

Global GDP growth, driven largely by non-OECD countries, is projected to average 3.1% p.a. over the forecast period (2020–2045), slowing from 3.8% p.a. in the medium term to 2.7% p.a. from 2035–2045. The global economy will more than double in size by 2045 from 2020, and is projected to rise from around \$125 trillion (tn) in 2020 to almost \$270 trillion in 2045. China and India combined are expected to account for 37% of global GDP in 2045. The Organisation for Economic Cooperation and Development (OECD) is set to account for slightly less, at 34%.

Recent changes in energy policies focus on accelerating the energy transition. There is growing awareness among policymakers in many countries that there is a need to accelerate actions to address climate change, which recently resulted in ambitious new policy intentions to achieve net-zero emissions by 2050. These trends are being observed at a time when post-COVID-19 recovery plans in some major economies provide significant sources of funding that could accelerate the energy transition.

Global energy demand is set to increase from 275.4 million barrels of oil equivalent a day (mboe/d) in 2020 to 352 mboe/d by 2045. Non-OECD primary energy demand is expected to constitute well over 70% of global primary energy demand in the long term, growing from 174 mboe/d in 2020 to 250 mboe/d in 2045. This growth is mainly attributable to increasing populations and growing economies in Asia, Africa and the Middle East.

Oil is forecast to remain the fuel with the largest share of the global energy mix until 2045. Despite decelerating oil demand growth in the second part of the forecast period and strong growth within other energy sources, such as other renewables, gas and nuclear, oil is expected to retain the highest share in the global energy mix during the entire period with 28% by 2045.

Global oil demand is forecast to rise by 17.6 million barrels per day (mb/d) between 2020 and 2045, growing from 90.6 mb/d in 2020 to 108.2 mb/d in 2045. Long-term projections highlight a contrasting demand picture with ongoing growing demand in the non-OECD and declining demand in the OECD.

Non-OPEC liquids are set to rebound in the medium term. The non-OPEC liquids supply is set to continue its recovery and regain

pre-pandemic levels in the course of 2022 to reach 71 mb/d by around 2030. However, it is set to decline in the long term to 65 mb/d, while OPEC sees an increase in its market share to 39% in 2045.

Required cumulative investment requirements in the oil sector amount to \$11.8 tn in 2021–2045. Of this, 80% or \$9.2 tn, is needed in the upstream.

In the downstream, crude distillation capacity is expected to increase by 14 mb/d between 2021 and 2045, with a significant slowdown in the rate of required additions. Global refining distillation additions are projected at 14 mb/d between 2021 and 2045, of which 6.9 mb/d are predicted for the medium term (by 2026) and 7.1 mb/d beyond 2026.

Uncertainties regarding future economic development, energy policies and technology have widened the range of possible oil demand and supply trajectories.

The roll-out programme involved presentations, both in person and via videoconference, to various international fora (including the Abu Dhabi International Petroleum Exhibition and Conference [ADIPEC], the Vienna University Executive Academy, World Energy Council [WEC] Austria, TESPAM and the European Association of Geoscientists and engineers [EAGE]). In addition, the *WOO* was presented at meetings of the OPEC Energy Dialogue programme to dialogue partners Russia, China, India, the Gas Exporting Countries Forum (GECF) and the Technical Meeting on Asian Energy and Oil Outlooks.

From its launch on 28 September 2021 until the end of December, the *WOO* pdf was downloaded 3,147 times. In this time frame, the interactive edition of the 2021 *WOO* was viewed 65,870 times and the main *WOO* page visited 33,143 times. The *WOO* Apps

(Android and iOS) were downloaded more than 863 times in the same time period.

The *Annual Statistical Bulletin (ASB)* is a comprehensive publication and excellent reference source for historical oil and natural gas data. It contains historical time series of major oil and gas flows, based largely on official sources. It also functions as an important source of reliable information for the benefit of different stakeholders in the hydrocarbon industry. The *ASB* 2021 contains key statistical data on oil and natural gas activities in each of OPEC's 13 MCs. In addition, it provides valuable data for many other countries grouped by newly adjusted, more disaggregated geographical regions, and covers the major economic zones around the world. This new regional categorization is in line and harmonized with other Secretariat flagship publications. In summary, the *ASB* provides a comprehensive quantitative overview of the global supply chain within the oil and natural gas industries. In regularly publishing the *ASB* and making such data publicly available, OPEC seeks to ensure greater data transparency and the increased sharing of information about the oil and gas industry with its many stakeholders. The 2021 edition of the *ASB* includes a separate interactive online version, which is freely available on the OPEC website, with available historical time-series data going back to 1960. In 2021, the interface, usability and functionality of the interactive version of the *ASB* were further improved to make it more user-friendly. The *ASB* is also available in a pocket version, as well as a Smart App version, with many advanced features.

The *long-term energy perspective for Africa* report assessed the long-term energy perspective for the continent by qualitatively and quantitatively analysing current energy

trends and factors that mitigate and influence energy accessibility on the continent. The study assessed the policies and strategies, investment requirements, technological developments, energy initiatives and structural changes necessary in the production and consumption of energy in the long term. Drivers and policies that will solve energy accessibility challenges in Africa and propel the continent towards sustainable energy development were also identified.

The future of the petrochemical industry and implications for oil demand in the medium and long term assessed the medium- and long-term growth of the petrochemical industry in light of existing and foreseeable trends and assessed the impact on the petrochemical feedstock slate. The study assessed the drivers, regulations, and technological developments supporting and challenging potential growth. The study explored the role of plastics recycling and the circular economy, assessing their impact on petrochemical demand and the feedstock mix. The implications of uncertainties were assessed in terms of sensitivities to an identified reference growth scenario.

Update on recent developments and the future potential of hydrogen in the energy mix determined to assess the future of hydrogen in the energy transition and its implications for the future energy mix. The study looked at the latest developments in the hydrogen business, including technology advancements and enabling policies. The study investigated options to produce hydrogen from both renewable energy sources and blue hydrogen from fossil fuels, in combination with carbon capture, utilisation and storage (CCUS). The study also discussed challenges related to infrastructure and the transportation of hydrogen. It looked at accompanying

measures that will aid in the deployment of hydrogen.

Update to assessing a regional supply/demand balance for crude oil by quality had the objective of updating the assessment of global crude oil supply/demand balance in terms of crude quality, which is defined in six distinct categories, and the evolution of this balance over the last seven years.

From a quality perspective, the share of light sweet crude intakes showed the most pronounced growth during 2010–2019, with data revealing a significant expansion in the overall share by 3 percentage point (pp) in 2019, compared with 2010. Meanwhile, the share of medium sour crude demand contracted by 4 pp, while remaining broadly unchanged in absolute levels over the entire study period.

World crude oil production increased by a cumulative 7.4 mb/d between 2010 and 2019. Globally, light sweet and sour crude production soared by 10.4 mb/d during this period, while in contrast, medium sour and heavy sweet production declined.

Trade data estimates show a general across-the-board increase in crude trade flows in all crude quality categories, with the most notable change being a massive rise in the trade flow of light sweet grades by more than 49% in 2019 over 2016. These gains can be almost fully explained by the ramp-up of crude exports by the US. At the same time, trade in heavy sour grades saw the biggest decline, falling by 17%, followed by medium sour crude, which declined by 3% between 2016 and 2019, largely due to falling imports by North America, as well as reduced exports from the countries participating in the DoC.

The balance by crude quality indicates that there has been a shift towards surplus

production of light sweet and light sour crude, mainly attributed to a surge in shale oil production. At the same time, medium and heavy grades show a deficit, notably since 2016, which could be attributed to voluntary production adjustments made by the countries participating in the DoC.

The Run-up to SB 52, update report provided an assessment of the main discussions and outcomes of important technical and high-level international and intergovernmental meetings and events leading up to the intersessional negotiation session in Bonn (SB 52), which related to the implementation of the Paris Agreement and the 2030 Agenda for Sustainable Development, as well as recent developments and emerging issues in the post-pandemic era. Moreover, the report analysed the key findings of the IPCC AR6 WG III contribution. It aimed to facilitate the proactive participation of OPEC MCs and non-OPEC countries participating in the DoC in relevant meetings of the UNFCCC subsidiary bodies, providing understanding of unresolved negotiating issues and emerging challenges for energy-exporting developing countries, and ensuring their preparedness to protect their interests in energy- and climate change-related matters.

The report on *Interlinkages between energy and sustainable development* focused on the significant contribution of energy to the objectives of the 2030 Agenda and achievement of other Sustainable Development Goals (SDGs). It also considered the process of the HLDE hosted by the UN Secretary-General under the auspicious of the United Nations General Assembly, including ministerial thematic forums on the five main topics of the HLDE, discussions within multi-stakeholder dialogues and ministerial segments, as well as the key takeaways of the

five reports launched during the preparatory process of the HLDE. The report highlighted the main energy compact pledges for expanding renewable energies and energy efficiency, as well as ambitious actions to achieve ‘net-zero emissions’ by mid-century, along with pledges by Parties and international financial institutions to mobilize financial resources for an ‘energy transition’.

Assessment of Parties’ new and updated Nationally Determined Contributions (NDCs) was a modeling study that quantitatively assessed UNFCCC Parties’ new and updated NDCs and their LTSs, as well as economic recovery plans in the post-pandemic era, especially those related to the mitigation of global emissions, with a focus on potential impacts on the energy sector, future oil demand and the energy mix, as well as possible impacts on the economies of energy-exporting developing countries. This empirical analysis aimed to assess potential future states of the global economy and energy systems through developing a set of modelling scenarios, and to provide an assessment of the socio-economic impacts of climate actions in these scenarios, incorporating in-house modelling expertise. The scenarios were designed in light of current socio-economic and policy landscapes, and announced mitigation policy commitments. The detailed structural results from this modelling exercise aimed to provide insights into the challenges that developing countries face in the ‘energy transition’, specifically those faced by energy-exporting countries.

The Run-up to COP 26 report focused on the main unresolved issues of the Paris Agreement Work Programme and other main matters that are critical for operationalization of the Paris Agreement, including market and non-market approaches under Article 6,

the transparency framework and developing common reporting formats and common time frames for NDCs, as well as a new collective quantified goal for climate finance. The report further assessed the NDC Synthesis Report prepared by the UNFCCC Secretariat, and addressed 2030 Agenda implementation and progress towards the achievement of SDG7. It also critically presented the outcomes of the 2021 HLPF and the HLDE, including their effects on energy-related discussions and climate change negotiation processes. The report aimed to provide a comprehensive assessment of the main issues that should be addressed and agreed upon at COP26, as well as the key issues to be addressed going forward.

The report entitled *Leaders' Summit on Climate* focused on this high-level event, held from 22–23 April 2021, and discussed the necessity of higher ambition for the mitigation of greenhouse gas emissions and its economic benefits, as well as assisting developing countries in addressing the impacts of climate change and enhancing adaptation. The report critically presented the key takeaways from the meeting, including new country climate targets to reduce emissions, creating job opportunities from climate action, expanding infrastructure and charging stations for electric vehicles, introducing pledges for 'net-zero' emissions, and enhancing ambition to achieve the 1.5°C target of the Paris Agreement. The report further highlighted the views of developing countries in the Summit, including the need to adhere to the principles of the Convention, address adaptation action to tackle the socio-economic aspects of climate change, provide means of implementation to developing countries (especially finance and technologies), and enhance multilateralism.

A briefing on *Emerging Developments in 'Climate Change and Sustainable Development Processes'* was a stocktake of recent developments in climate negotiation and sustainable development processes, along with IPCC-related matters, as well as the status of preparations in the run-up to COP26. It aimed to provide an update and a critical overview of emerging developments on issues related to energy, climate change and sustainable development. Emphasis was given to the status of UNFCCC negotiations, Paris Agreement implementation in the context of sustainable development and efforts to eradicate energy poverty, as well as to the critical role of IPCC reports on future energy and climate policy. The briefing also addressed the preparatory process of the HLDE and assessed actions in the context of energy-related SDGs.

A briefing on *recent trends in Environmental, Social and Governance (ESG) disclosures and related litigations: Impact on energy companies* focused on the actions of various stakeholders, including financial institutions, investors and insurance companies, in assessing and addressing climate-related financial risks in their portfolios, as well as overall risks for physical assets. It also addressed the guidelines for financial disclosure of climate-related risks that have been mainstreamed in the guidance, policies and standards of the financial sector, as well as the non-financial reporting guidelines, which cover environmental, social and efficient management aspects of companies. The briefing also considered litigation against international oil companies (IOCs) and the judgement of the Hague District Court in the Royal Dutch Shell case. It further addressed the potential impacts of ESG disclosures and litigation against the oil and gas industry and IOC operations,

considering their impact on future investment and the supply of oil and gas.

A briefing on the *IEA report: 'Curtailing Methane Emissions from Fossil Fuel Operations – Pathways to a 75% cut by 2030'* critically assessed the International Energy Agency's (IEA) report on reducing methane emissions from the oil and gas industry, prioritizing it as a major mitigation action that could be expeditiously implemented. It also considered the proposed actions and regulatory framework for reducing methane emissions by countries and companies. Proposed policies and measures, including trade measures, were also considered, presenting some key takeaways and views on the subject matter.

Technical meetings and workshops

The Secretariat also held technical and coordination meetings and workshops, as well as specific complementary briefings on topical issues of a regular nature during the year. Additionally, there were systematic technical interactions with various entities and agencies to discuss and share expert insights on oil market conditions and prospects.

For example, given the importance of the share of OECD commercial stocks in total global oil inventories, the OPEC Secretariat organized and held a workshop with a group of outside experts and technical delegations of the DoC on 15 September 2021 via videoconference. The workshop was convened to re-assess this share, which is used as a measure to serve as a proxy to assessing changes to overall oil inventories. An accurate determination of this share allows for the correlation of an implied global oil stock change derived from a global oil supply/demand balance, with actual observed and reported stock changes.

The 1st Workshop with Energy Companies was hosted by the OPEC Secretariat on 11 October 2021 via videoconference. The workshop focused on the role of the petroleum industry in the energy transition, along with the challenges and opportunities facing the industry. Presentations and discussions centred on a number of key issues relevant to the energy sector, including perspectives of national and international oil companies on the role of petroleum in the energy transition, efforts to bolster carbon capture projects, opportunities and challenges associated with rapidly changing industry dynamics, as well as topics related to COP26.

The 3rd Workshop on Energy and Information Technology was held by the OPEC Secretariat on 26 May 2021 for the first time online due to COVID measures. The workshop featured two sessions. The first session 'Petrochemicals: potential demand and emerging technologies' discussed the role of advanced technology in shaping petrochemical operations to meet the projected rise in demand for petrochemicals and explored the implementation of emerging crude-to-chemical technology, as well as growth surrounding plastics recycling. The second session dealt with 'Digitalization in the energy sector: trends and breakthroughs'. The session covered trends in digitalization, cyber security and communication technologies. Among the topics discussed were the costs and deployment challenges of digitalization in the energy sector, opportunities and risks associated with blockchain technology, M2M technologies and 5G as digitalization enablers and finally current standardization efforts in the field of energy sector digitalization.

In addition, the Secretariat organized the 1st OPEC/GECF Webinar on Data and Statistics for Venezuela. This technical workshop

on capacity-building was held at the OPEC Secretariat in July 2021 via videoconference with esteemed OPEC MC Venezuela and the OPEC Secretariat, as well as the GECF. The main objective of this meeting was to discuss key issues relating to data submission from Venezuela to the OPEC Secretariat and the GECF, as well as provide guidelines on how to enhance the comprehensiveness, timeliness and reliability of statistics from Venezuela. In total, 53 attendees were present. Similarly, the OPEC Secretariat also organized a separate, tailor-made workshop on capacity building for esteemed MC Libya, which was held in January 2021 via video conference. The main goal was to address major challenges in association with directly communicated questionnaires (PSS, Joint Organizations Data Initiative [JODI] Oil, JODI Gas and the OPEC Annual Questionnaire [AQ]).

The Secretariat hosted the 4th Technical Workshop on Climate Change on 7 July 2021, under the theme of 'The role of the Circular Carbon Economy (CCE) and 'Green Initiatives' in combating climate change'. This virtual event aimed to discuss the various aspects of the CCE platform, relevant technologies and their benefits, as well as future potential, promoting an approach through cooperation and partnerships. It also provided a conducive platform for discussion on the 'Saudi Green Initiative' and the 'Middle East Green Initiative', which will significantly contribute to achieving global climate change targets.

This workshop was organized back-to-back with the 19th Coordination Meeting on Climate Change, which aimed to address recent developments and substantive issues in UN processes related to energy, climate change and sustainable development – including critical negotiations in the run-up to COP26, key findings of the IPCC AR6 Working

Group III contribution on energy matters, and efforts to achieve universal energy access.

Moreover, the 20th Coordination Meeting on Climate Change, held virtually on 20 October 2021, convened with the objective of addressing emerging trends and challenges in the run-up to COP26. Discussions also focused on the impact of Parties' NDCs, LTSs and 'net-zero' pledges on future energy demand and the economies of energy-exporting developing countries. The key outcomes of the HLDE were also considered. Participants agreed upon common positions on a number of critical climate negotiation issues that would allow for the operationalisation of the Paris Agreement in the context of sustainable development and poverty eradication.

Environmental debate

The Paris Agreement, under the auspices of the UNFCCC, as well as the 2030 Agenda, are the two landmark action plans adopted in 2015 for the world to enhance collective efforts aiming to reduce global emissions, increase adaptation capacity and advance progress towards economic, social and environmental sustainability. Yet, unprecedented climate impacts continue affecting every region of the globe and the COVID-19 pandemic necessitates a sustainable and resilient recovery that leaves no one behind.

The pandemic has undoubtedly brought widespread human and socio-economic ramifications, also affecting UN processes on climate change and sustainable development. COP26, the first in-person UNFCCC session since the outbreak of COVID-19, was a critical event for climate diplomacy to enhance trust, make considerable progress to reach a consensus on substantive negotiation issues, and achieve an ambitious and just outcome on global efforts to tackle

climate change through an inclusive, balanced and fair process.

To this end, Parties were called upon to strengthen the global response to the challenge of climate change through enhancing ambition for climate action and support, as well as finalizing unresolved issues of the Paris Agreement rulebook, giving consideration to sustainable development and efforts to eradicate poverty, including via universal access to reliable and affordable modern energies. Aiming to ‘build back better’, major economies also pledged trillions to recovery spending, and many countries advocated for a ‘green’ recovery to the pandemic that could affect future oil demand and the energy mix.

At the same time, a number of moments marked the road to COP26, which reflect an intense sequence of international political mobilisation on climate action, including:

- The Climate Adaptation Summit, which aimed to launch a comprehensive Adaptation Agenda addressing climate challenges, especially for developing countries, enhance resilience to climate change, and set practical adaptation solutions and plans up to 2030.
- The Leaders’ Summit on Climate focused on higher ambition for climate mitigation and its economic benefits, helping developing countries to address the impacts of climate change and enhancing adaptation. The May-June Climate Change Session aimed to offer an opportunity for the UNFCCC subsidiary bodies (Subsidiary Body for Implementation [SBI] and Subsidiary Body for Scientific and Technological Advice [SBSTA]) to convene their sessions virtually for the first time, holding

informal consultations on substantive issues related to the Paris Agreement rulebook.

The pre-COP meeting and G20 Meetings also provided impetus and focused high-level political discussion on climate change ahead of COP26. Moreover, the UN General Assembly, the 2021 HLPF, the 2021 SDG Moment and the HLDE all considered the impact of the pandemic on SDG implementation (including SDG7 on energy), as well as the need to enhance climate ambitions. The key outcomes of these events include a global roadmap on achieving SDG7 by 2030 and ‘net-zero emissions’ by 2050.

In this context, Parties adopted the ‘Glasgow Climate Pact’ at COP26 and agreed after six years of intense negotiations upon unresolved issues required for the full operationalization of the Paris Agreement. The finalisation of the Paris rulebook is a major achievement, yet developing countries had to settle for weak assurances on finance to adapt to the impacts of climate change. A breakthrough at the summit was an explicit reference to coal. Parties made commitments to end deforestation, reduce methane emissions, mobilise climate finance, and contribute to a 1.5°C goal. The resolution of Article 6 was also a significant step towards implementing the Paris Agreement goals.

Considering the dynamic nature of multi-lateral and intergovernmental UN negotiations on climate change and sustainable development, the Secretariat and its EMU have expanded research activities with the objective of assessing emerging challenges and opportunities, while remaining engaged in UN processes and focusing on critical issues for MCs.

Besides conducting research on substantive issues related to UNFCCC negotiations, which were crucial for the finalization of the Paris Agreement rulebook, the Secretariat

critically reviewed the second-order draft of the WG III contribution to the IPCC AR6, and proactively attended the 2021 IPCC sessions. The Secretariat additionally participated in virtual UN sessions and prepared policy-relevant research output, which was shared with MCs, aiming to raise awareness and provide a better understanding on matters related to climate change and sustainable development critical to their collective interest. In addition, major issues related to energy, climate change and sustainable development were thoroughly reflected in the 2021 edition of the *WOO* and the review of the LTS.

The Secretary General's report to the Board of Governors and Ministerial Conference meetings presented the latest developments on climate change negotiations and main COP26 outcomes, additionally examining progress in achieving the SDGs and HLDE roadmap on SDG7.

In addition, a total of 11 reports and studies were developed on issues related to energy, climate change and sustainable development – including a modelling study. The latter aimed to quantitatively assess UNFCCC Parties' new and updated NDCs, their long-term strategies and 'net-zero emission' targets, focusing on potential impacts for the energy sector, future oil demand and the energy mix. A number of briefing notes were also prepared and focused on various critical issues of importance to energy-exporting developing countries.

The 19th and 20th Coordination Meeting on Climate Change for OPEC MCs and non-OPEC countries participating in the Charter of Cooperation, as well as the 4th Technical Workshop on Climate Change focused on 'The role of Circular CCE 'Green Initiatives' in combating climate change', convened via videoconference. They provided a platform

for coordination and facilitated an exchange of views on critical issues related to UN processes on climate change and sustainable development.

Moreover, an OPEC delegation attended all critical UNFCCC and IPCC sessions, along with the HLPF and HLDE, as well as various meetings organised by international and intergovernmental organisations, including those convened by the G20 Presidency on climate change and energy sustainability. The Secretariat also attended the 'Saudi Green Initiative Forum' and 'Middle East Green Initiative Summit', hosted by the Kingdom of Saudi Arabia.

Finally, the Secretary General proactively engaged in various high-level meetings related to climate change and universal energy access, including COP26, on which occasion the Secretary General delivered an OPEC statement at the joint high-level segment.

International dialogue

OPEC has long been aware of the importance of dialogue between energy stakeholders. The interconnectedness of global markets, as well as the global impact of critical energy issues such as security of supply, security of demand, economic prospects and environmental issues, make such dialogues necessary to preserve balance in the oil and gas industry.

Taking this into consideration, OPEC strives to enhance its current partnerships and develop future opportunities for cooperation. The Secretariat is proactive in organising and participating in international dialogues via many high-level meetings, technical meetings, joint studies, workshops and memberships.

In this context, OPEC's energy dialogue activities saw another successful year in

2021. Although the year continued to be marked by COVID-19 and its repercussions in the form of travel restrictions, OPEC successfully achieved 100% completion of the dialogues committed to in the work programme by meeting all dialogue partners, most of them via videoconference. OPEC met with 22 energy dialogue partners at more than 30 events over the course of 2021, inaugurated a new OPEC-Africa dialogue, bringing all interactions with African organizations, including the African Energy Commission (AFREC), African Petroleum Producers' Organization (APPO) and African Refiners and Distributors Association (ARDA) together under one umbrella, and held the first Technical Workshop with Energy Companies. Although the 15th High-level Meeting of the EU-OPEC Energy Dialogue was postponed to 1Q22, other activities took place with the EU, including the 9th Technical Roundtable.

Under the OPEC-EU Energy Dialogue, the OPEC Secretariat hosted the 9th Technical Roundtable on the subject 'Hydrogen strategies – finding common ground?' on 29 June 2021, via videoconference. The 15th High-level and 4th Technical Meetings, which were proposed to take place in November 2021 and be hosted by the EU, were postponed and will take place in 1Q22.

Cooperation under the OPEC-Russia Energy Dialogue continued in 2021 with the convening of the 4th Technical Meeting on 7 October 2021 via videoconference. This was followed by the 8th High-level Meeting on 14 October 2021, hosted by Russia on the margins of the Russian Energy Week International Forum in Moscow, providing further impetus for the development of collaboration between the two parties, especially regarding technical and research aspects.

The 5th High-level Meeting of the OPEC-China Energy Dialogue was held on 3 December 2021 via videoconference. The meeting was co-chaired by Administrator of the National Energy Administration (NEA) Zhang Jianhua, and OPEC Secretary General Mohammad Sanusi Barkindo. Ambassador of the Permanent Mission of China to the United Nations and other International Organizations in Vienna, Wang Qun also participated in the meeting. It focused on short-, medium- and long-term energy market prospects, China's National Energy Development Plan, as well as the country's efforts in the realm of the energy transition and addressing energy security.

The 5th High-level Meeting of the OPEC-India Energy Dialogue was held on 29 October 2021, hosted by India via videoconference and co-chaired by Hardeep Singh Puri, India's Minister of Petroleum and Natural Gas and Minister of Housing and Urban Affairs and Mohammad Sanusi Barkindo, Secretary General of OPEC. The meeting followed the 4th Technical Meeting held on 28 October 2021 via videoconference. Furthermore, the Indian Ministry of Petroleum and Natural Gas contributed a chapter entitled 'A focus on India' to the 2021 *WOO*. An OPEC-India High-level Consultation Meeting between Mohammad Sanusi Barkindo, Secretary General of OPEC, and Dharmendra Pradhan, Indian Minister of Petroleum and Natural Gas and Steel was held on 24 June 2021 via videoconference in order to discuss the current status of the oil and energy markets, including OPEC's short-term projections.

The 7th Technical Meeting on Asian Energy and Oil Outlooks was held on the 8 November 2021 via videoconference. The aim of the 7th Technical Meeting was to focus on addressing developments in the Asian oil and energy markets, associated drivers and challenges, as well

as the prospects for energy demand and the impact of policies related to carbon neutrality.

Under the OPEC-US Energy Dialogue, the Secretary General hosted a series of energy roundtables with select experts from international institutions, the oil industry and the financial community. Furthermore, four private thematic sessions were organized as part of a broader programme within CERAWEEK 2021.

The inaugural OPEC-Africa Energy Dialogue High-level and Technical meetings were held on 2 June 2021 via videoconference and allowed for an in-depth discussion on the enablers for investment in the African energy sector, accessibility and affordability of energy to eradicate energy poverty, as well as the future of oil and energy in the post-COVID-19 recovery and the energy transition for Africa.

The 11th IEA-IEF-OPEC Symposium on Energy Outlooks was held via videoconference from Riyadh, Saudi Arabia on 17 February 2021. The Symposium was hosted by the IEF under the patronage of the Minister of Energy of Saudi Arabia HRH Prince Abdulaziz bin Salman Al Saud. This event is part of a wider work programme jointly agreed upon by the IEA, the IEF and OPEC and endorsed by energy ministers at the 12th IEF Ministerial Energy Forum as part of the Cancun Declaration. The 12th Symposium is proposed to be held on 16 February 2022, in Riyadh, Saudi Arabia.

The 5th IEA-IEF-OPEC Coal and Gas Symposium, hosted by IEA, took place on 28 April 2021 via videoconference. In its fifth edition, the Symposium examined short- to long-term gas and coal market developments, the COVID-19 recovery and post-pandemic outlooks, gas decarbonization, and the role of gas and coal in the energy transition.

The exchange of oil demand and supply data within the framework of the OPEC-IEA-IEF Collaboration on Historical Baseline Data

Comparison continued in 2021. Regular communication also addressed short-term oil market assessment findings and technical issue follow-ups.

The 8th Joint IEA-IEF-OPEC Workshop on Interactions between Physical and Financial Energy Markets was held via videoconference on 21 October 2021. The joint IEA-IEF-OPEC meetings cover the evolving inter-linkages between physical and financial energy markets and have developed into a unique, high-level technical event, bringing together a diverse range of market participants to discuss issues that are not addressed in other high-level fora. The 2021 workshop focussed on investment opportunities in the oil industry in light of recent trends in the global economy and financial markets and dove deeper into exploring the impact of an accelerated drive towards ESG on investment in E&P activity.

The Secretariat, as one of the main partner organizations of the JODI initiative and in line with its commitments to energy data transparency, continued its active stance in promoting JODI by significantly contributing to both the JODI-Oil and JODI-Gas initiatives in 2021 through data submission from OPEC MCs and various other related activities, such as meetings and international conferences. Due to the global COVID-19 pandemic, there was no physical JODI Inter-Secretariat (IS) Meeting in 2021, but one online/virtual IS meeting took place in June 2021 that was attended by OPEC.

The main activities in JODI-Oil and JODI-Gas relate to enhancing the quality of JODI oil and gas data, expanding the current data collection to cover other energy commodities, and underscoring the importance of JODI data transparency in the international energy market scene. The initiative aims particularly at addressing specific challenges, such as

resources in some countries and organizations, and the overall performance of OPEC MCs. OPEC's participation in JODI-Oil and JODI-Gas has remained very good. It is also worth noting that both databases face challenges concerning the overall quality (coverage and timeliness) of data for some major OPEC and non-OPEC oil and gas producing and consuming countries, despite significant improvements in recent years.

As part of a continuous collaboration, and following the 3rd Technical meeting on 20 October 2021, the 2nd High-Level Meeting of the OPEC-GECF Energy Dialogue was held on 27 October 2021 via videoconference and was co-chaired by Mohammad Sanusi Barkindo, Secretary General of OPEC, and Yuri Sentyurin, Secretary General of GECF. Cooperation in 2021 also encompassed the 6th Collaboration Meeting on Data and Statistics held on 17 March 2021, the 1st GECF/OPEC Joint Capacity Building Action organized with common MC Venezuela on 8 July 2021, as well as many other in-house technical and coordination meetings at both Secretariats.

Both bi-annual International Monetary Fund (IMF)/World Bank meetings – the Spring Meetings in April and the Annual Meetings in October – were held via video conference in 2021. As per long-standing practise, OPEC participated in the virtual meetings of the International Monetary and Financial Committee (IMFC) and the G24 meetings and provided written statements on the oil market to distinguished delegates of the IMFC Meetings, highlighting OPEC's efforts to stabilize the oil market and emphasizing its positive effect on the global economy. In the bi-annual meetings of the G24, OPEC was also given the opportunity to present an oral intervention. These meetings provided a valuable opportunity to discuss oil-market related de-

velopments and explain the efforts that OPEC and its partners undertook to counterbalance the negative effects of COVID-19.

Under the auspices of the OECD International Regulatory Cooperation, the OPEC Secretariat participated in meetings of the 16th Session of the Network of Economic Regulators held between 13 and 15 April 2021 and the Regulatory Policy Committee session on 22 April 2021. Furthermore, the OPEC Secretariat was also invited to attend a virtual seminar on 'Regulatory approaches and tools to meet the decarbonisation challenge,' held on 16 April 2021, as well as a technical meeting of the IO partnership entitled 'The IO Partnership: current work and future ambitions', which took place via videoconference on 29 April 2021. OPEC participated in the 8th Annual Meeting of International Organizations, held on 13–14 September 2021, via videoconference.

OPEC representatives joined the 23rd Meeting of the Vienna Energy Club (VEC) held on 26 May 2021 via videoconference. The OPEC Secretariat then assumed the position of rotating host of the VEC between July and December 2021 and hosted the 24th Meeting of the VEC on 22 November 2021 via videoconference. Moreover, the OPEC Secretariat participated in a COP26 side event on 9 November 2021 entitled 'Innovation – A Catalyst for a Net-Zero Emissions Energy Transition: Insights and Experiences of the VEC'.

The OPEC Secretariat participated in the International Civil Aviation Organisation's (ICAO's) stocktaking on aviation in-sector CO₂ emissions reductions, which took place from 31 August to 3 September 2021 via videoconference. The four-day event provided an opportunity to share expert views and work on the future of aviation and how stakeholders involved in this sector stand with respect to ICAO's long-term (2050)

carbon neutrality goal. With this aim, various aviation sector companies presented their latest advances in technology innovation, operations and fuel utilization aimed at combatting the threat of climate change.

OPEC actively participated in G20 energy-related events organized under the G20 Italian Presidency in 2021. Three main pillars comprised the overarching agenda for the year: people, planet, and prosperity. Within the energy workstream, initiatives were carried out under the guiding topic *'Resilient, smart and sustainable cities – A main driver towards a climate neutral, net-zero emissions future'*.

An OPEC delegation actively participated in the following events: the joint meetings of the G20 energy and climate technical experts (ETWG-CSWG), which are responsible for carrying forward energy and climate initiatives; the meetings of the Energy Focus Group, which were established by the energy ministers last year under the G20 Saudi Presidency to carry out efforts to support energy market stability in the short term; and an extensive list of collateral events organized by the 2021 Presidency on topics supportive of its energy-related priorities. The culmination of the energy workstream was the combined G20 Energy and Climate Ministers Meeting held in Naples, Italy, on 23 July 2021. The communique reaffirmed the G20's consensus on the CCE, which was an important outcome of the 2021 G20 Saudi Presidency. The 2021 G20 Rome summit was held in Rome, Italy, on 30–31 October 2021. Indonesia will host the G20 Presidency in 2022.

OPEC participated in the 59th and 60th sessions of the IEA Greenhouse Gas (IEAGHG) Programme Executive Committee, which were held via videoconference on 5–7 October and 4–6 May 2021, respectively. The Programme is conducting a study on 'Blue Hydrogen:

Beyond the plant gate with element energy' under the so-called OPEC-defined activities, which will be finalized in early 2022. Moreover, the Programme disseminates CCUS research information intended for policymakers, industry and regulators via reports, networks, conferences and webinars.

The OPEC Secretariat continued its ongoing cooperation with the King Abdullah Petroleum Studies and Research Centre in 2021, with attendance at various events and the exchange of information, including the sharing of OPEC publications.

Activities within the framework of the DoC

The DoC has been instrumental in countering the unprecedented impact of COVID-19 on the oil market, drawing on its five years of experience in working towards rebalancing fundamentals and helping return sustainable oil market stability.

The ongoing efforts of the DoC have helped restore balance to the oil market, instilling confidence and stability, and providing crucial support to the economic recovery. The DoC framework has also proven visionary in its creation of evolving essential monitoring mechanisms that allow for the regular evaluation of global market conditions, providing information for DoC countries to act accordingly. This was clear in 2021, with decisions that steered a course for further market rebalancing. It is important to remember just how far this cooperation has come over the past five years, as exhibited by decisions taken as a result of the pandemic.

Within the framework of the DoC, there were 11 JMMC and 11 JTC meetings during 2021. All meetings were held via videoconference.

Two technical meetings for OPEC and non-OPEC producing countries were held in 2021

under the umbrella of the DoC. The 9th Technical Meeting of OPEC and non-OPEC Producing Countries took place on 17 June 2021 via videoconference. The event was dedicated to the assessment of the global oil demand/supply balance for 2021 and 2022. The meeting focussed on exploring prevailing market conditions and global oil balance, and how this would evolve in the next year. The discussion also looked into areas of uncertainty that have a bearing on the pace of growth in underlying fundamentals, given, in particular, the impact of COVID-19 on both world oil demand and supply in 2020 and subsequent rebound and recovery paths.

The 10th Technical Meeting of OPEC and non-OPEC Producing Countries was held on 25 November 2021, also via videoconference. The main theme of this meeting was to re-assess the relationship between economic and oil demand growth, following the impact of COVID-19 on both the global economy and world oil demand in 2020, and subsequent rebound and recovery paths. The discussion explored the interlinkage between economic and oil demand growth, how different economic sectors have been affected by the pandemic and how this would evolve in the short-to-medium term.

Moreover, three follow-up workshops were organized between countries participating in the DoC and major secondary sources reporting crude oil production volumes. The workshops were individually attended by: Congo, Equatorial Guinea and South Sudan. The objective was to exchange information amongst the OPEC Secretariat, invited countries and secondary sources regarding methodologies used by the third-party data providers to estimate crude oil production numbers. The workshops proved to be extremely beneficial for all involved stakeholders, providing

unique first-hand information on the subject matter.

The review of the OPEC Long-Term Strategy

In line with decisions of the 179th Meeting of the Conference, the third review of the LTS was conducted in 2021. In the review process, the High-level Working Group (HLWG) from MCs held six meetings during the course of 2021.

It assessed the achievements of OPEC since the last review of the LTS in 2016, looked at objectives and identified key challenges under four clusters, addressing critical issues and main drivers going forward. It explored new plausible scenarios and sensitivity cases to capture certain future developments using a quantitative model approach. Furthermore, the elements of the strategy in these scenarios were developed, as were the ensuing recommendations for its implementation.

The third review of the LTS constituted a critical process to reflect upon the impacts of COVID-19 and possible repercussions shaping the global energy system and a sustainable energy transition.

Following the adoption of the LTS 2021 document, the Secretariat will proceed to align other instruments to its content, starting with the Medium-Term Programme and Annual Work Programmes.

Training and knowledge transfer

Under the activities of the OPEC Academy (OA), participants in OA programmes both from MCs and outside continued to have the opportunity to acquire knowledge and understanding, as well as critical thinking, practical, professional and personal skills through assessments that are challenging, rigorous, fair, transparent and appropriately aligned to the learning undertaken and intended learn-

ing outcomes. Programme participants and involved Secretariat staff members were able to gauge learning needs and achievements, develop judgement and independence in learning and make informed choices in planning participant studies and supporting careers.

The OPEC Secretariat and the City of Vienna jointly hosted the first Vienna Energy Scholar Programme from 4–8 October 2021. The new programme focusses on promoting education and raising awareness of the opportunities and challenges that surround the energy sector among the youth.

It aims to provide successful candidates with the opportunity to learn about the Organization's activities with a focus on short-, medium- and long-term energy perspectives and policies. The energy transition and environmental challenges, as well as other important topics relevant to the energy industry, were also addressed.

The annual Multi-Disciplinary Training Course (MDTC) is designed to provide MC participants with a thorough overview and first-hand information about OPEC's role in the assessment of the energy demand and supply balance. It also informs participants about the Secretariat's wide range of activities as a service provider to MCs and its role as a representative for MCs in international relations. The 20th MDTC was held via videoconference from 29–31 March 2021.

The Summer Fellowship Programme (SFP) provides professionals from OPEC MCs with the opportunity to improve their expertise and technical skills through engaging in Secretariat research activities. Summer Fellows have the opportunity to participate in research and studies, as well as to perform other tasks undertaken by the Organization which could further enhance their knowledge and expertise in fields relevant to their

professions and future careers. At the same time, OPEC benefits from the presence of SFP participants through increased networking with MCs.

The RD hosted five Summer Fellows who completed the programme in 2021. They wrote on several themes, including: Non-Crude Liquids Supply – Trends and Outlook; Eradication of Energy Poverty in Nigeria by 2030; and the Creation of Carbon Pricing Schemes and Their Impacts on Energy Prices.

The OPEC Secretariat continued with the Lecture Series Programme (LSP) with leading analysts, researchers and company officials to allow for an active and timely exchange of views. In 2021, there were 13 lectures held on pertinent topics, including: Technical and Commercial Viability of Carbon Capture Utilization and Storage from Fossil Fuels in Achieving Net Zero Carbon; Crude Oil Supply and Trade Flows: OPEC+, USA, Floating Storage; The New Era of Oil and Gas 4.0: Driving more Sustainable Growth; Oil Trading Analytics For Global Crude Oil and Product Markets; the Role of Blockchain in the Oil and Energy Industry; the Outlook for US and Canadian Oil Supply and How Politics, Infrastructure, Access to Capital and Shifts in Producer Business Models May Impact Future Trends; The Short- and Medium-term Tanker and Maritime Trade Outlook.

Database and communications

In 2021, the Statistics, IT Development Team and Information Centre provided data services to the Organization and its MCs. Statistical databases were updated and maintained to extend coverage. Data quality was also improved through continued automation of data processing and validation.

Web applications developed for the support division were upgraded with new

functionality to improve internal operations and activities.

Following the recommendations of the internal audit, a Contracts Management System (COSMAS) was developed and rolled out in order to improve monitoring of the contracting process and establish a central archive for contract documentation.

The procurement process has been enhanced with new features such as integration with the COSMAS and enhancements to comply with the administrative instruction for procurement.

Interactive websites, downloadable pages, as well as mobile apps for the *WOO*, *ASB* and *MOMR* publications were updated. In addition, the back-end content management system was further developed to enhance the process of updating and maintaining digital publications. Feedback from users accessing publications was gathered using an online survey system.

As a continuation of the Information Security Programme, access to state-of-the-art Security Awareness Trainings was extended to all users of the OPEC Intranet to strengthen knowledge in effectively addressing cybersecurity challenges.

The OPEC Document Management System was enhanced and upgraded to support collaborative work at the Secretariat, as well as interactive collaboration with OPEC MCs and countries participating in the DoC.

The software and hardware infrastructure utilized to host databases and provide access to stakeholders via different delivery channels was successfully migrated to a new virtualisation platform and enhanced data storage system.

The Development Team, led by ESD, supported the energy modelling activities of the

Secretariat by contributing IT expertise to the development of the forthcoming version of the OPEC World Energy Model.

The online conferencing, video streaming and multimedia activities of the Secretariat were supported throughout 2021.

The Development Team attended trainings in order to keep abreast with the latest developments in IT, information security management and project management.

A project was started to establish an Information Security Management System and prepare for its certification according to the ISO/IEC 27001 international standard for information security.

The OPEC Big Data platform was shared and made available to OPEC MC Governors following a presentation on the progress of the OPEC Big Data Project during the 158th Meeting of the BoG on 19–20 May 2021. Furthermore, a training workshop on the use of the OPEC Big Data platform was organized on 23 November 2021 and attended by a number of representatives from OPEC MCs, who provided numerous comments and positive feedback on the current status of the project.

The 20th Annual Statistical Meeting (ASM) convened on 17–18 May 2021, as a webinar for the second consecutive year due to the ongoing COVID 19 pandemic. The 20th ASM aimed primarily at strengthening the flow of regular oil, gas and other energy-related statistical data submitted by MCs. Due to the COVID-19 pandemic, the meeting was almost solely devoted to separate, interactive discussions with each MC on their submitted OPEC 2020 Annual Questionnaire (AQ2020) and the *ASB* 2021 blue print.

The meeting underlined the vital role of timely and accurate data, as well as the importance of efficient cooperation and communication between the Secretariat and MCs in order

to continuously improve the quality and performance of data submission. It was agreed to further enhance data quality and submission and continue the established strong cooperation in the form of training workshops tailored for individual MCs in the near future.

The meeting was attended by 65 participants from all OPEC MCs, a significant improvement in MC participation compared with the previous year, when only 37 participants attended from ten OPEC MCs.

In 2021, the Information Centre assisted OPEC staff members, delegates from OPEC MCs and external users by providing research support and reference services, extending access to online databases, offering electronic delivery of subscribed reports and fulfilling reference and helpdesk requests. The Information Centre continued developing its print and digital collection throughout the year by purchasing books and reports, as well as managing subscriptions to online databases, reports, journals and newspapers.

In 2021, the OPEC Information Centre continued with regular activities and the completion and implementation of initiated projects.

In 2021, the Information Centre conducted an in-house initiative to promote available online resources in order to achieve cost efficiency and optimize the usage of institutional licenses. In total, the Information Centre received feedback from 16 OPEC staff members and provided 57 new credentials.

A project to digitalize the Information Centre started in early 2020. The main goal of the project is to provide external users from OPEC MCs and worldwide access to the valuable library collection. Digitization refers not only to scanning or capturing of analog content, but a suite of activities that enable discovery, delivery, access, and long-term pres-

ervation of the library collection. In 2021, due to ongoing restrictions caused by the COVID-19 pandemic, the Information Centre commenced processing existing digitized maps and pamphlets and continued with the implementation process for the digital interface software Visual Library.

With regard to research support services, the Information Centre provided 436 publications in response to 26 research requests in 2021.

In 2021, the Information Centre successfully conducted an annual assessment of OPEC subscriptions. Following users' feedback on evaluated subscriptions, some titles were cancelled due to low usage or the existence of alternative sources, which resulted in improving cost and usage efficiency regarding OPEC subscriptions.

The effects of the digital transformation process via changing the format of selected publications from print to online, resulted in new cost savings for the upcoming year.

PR and Information Department

The OPEC Secretariat continued to navigate the COVID-19 pandemic for a second year in 2021, which created ongoing challenges for staff of the Public Relations and Information Department (PRID). Lockdowns were underway for much of the year, with PRID staff working primarily in home office, attending in person only as deemed necessary.

In order to support stabilization of the oil market, the Secretariat continued to reach out to myriad parties to discuss market conditions. Thus, in addition to regular meetings and dialogues, discussions specifically dealing with the impact of COVID-19, including

monthly JTC and JMMC meetings, along with extra ONOMM, were scheduled and required support from PRID in the form of speechwriting, *OPEC Bulletin (OB)* articles, media relations, facilitation of press conferences, news items, press releases, social media posts, reports, design services and audio-visual (AV) coverage. A great number of bilateral meetings were also held with MCs, non-OPEC nations and global consultancies.

PRID staff continued to attend to duties related to the historical DoC, which was signed on 10 December 2016. With COVID-19, more Ministerial Meetings were held than usual over the year. Prior to COVID-19, the JTC and JMMC were held monthly, and the ONOMM biannually. Regular meetings associated with the DoC were ongoing throughout the year, including 11 regular meetings of the JMMC (25th–35th) and JTC (47th–57th), along with 11 ONOMM (13th–23rd) and two technical meetings with the framework's 23 participants, all of which required extensive support from PRID staff.

The public image of OPEC and its enhancement throughout the years continued to be exceedingly significant during 2021, as OPEC continued to be into the spotlight with its work to stabilize the oil market in extraordinary times, as it recovered from an unprecedented drop in demand in the early days of the pandemic. These efforts were widely recognized on the broader world scale and closely followed by the industry, world leaders, academics, media, etc.

The importance of improving and enriching the image of the Organization was identified in OPEC's most recent LTS, thus PRID activities focused on this. Diverse tasks were undertaken over the year – from editorial writing and speechwriting, to public and media relations and outreach programmes, to

the design, editing and production of materials and publications, to AV activities and the distribution of key publications. PRID played a key role in ensuring that the Organization was presented to the public in a positive and desirable manner at all times.

Fine-tuning the message of the Secretariat is also a part of PRID's contribution throughout the year, while working towards the achievement of departmental priorities and generating high-quality output. The Organization's essential messaging through its various outreach channels remained strong in 2021, including 'openness and transparency', 'dialogue and cooperation' and 'stability and security'. These themes were enhanced as the oil market battled to overcome the effects of the pandemic.

Although PRID was primarily responsible for editing, designing, producing, printing and distributing materials, the content of this output varied greatly, depending on publication type.

As in previous years, there was especially close cooperation between PRID and the Secretariat's RD in the area of publications throughout the year. The work of PRID also required close cooperation with other Departments and Units, including SGO, LO, AITSD, DSD, PSD, ESD and EMU, as well as MCs themselves. All departments within the Secretariat benefitted from the expertise of PRID's three sub-sections – editorial, public relations (including AV), and design and production (D&P).

Among the services that PRID rendered were the provision of press and news releases, articles for the *OB*, as well as media coordination.

The Organization turned 60 in September 2020. To mark the occasion, OPEC's Founder Member Iraq graciously offered to host the

historic event. However, the celebration has been postponed multiple times due to the COVID-19 pandemic and is now scheduled to take place in 1Q22. The Secretariat's 60th Anniversary Organizing Committee, chaired by the Head of PRID, continued to cooperate with its counterpart in Iraq on many issues to ensure a successful celebration of this important milestone in the Organization's history.

For the celebration in Baghdad, the Secretariat's committee collaborated closely with Iraq's Anniversary Organizing Committee on preparations, including issues related to communication, media and PR, protocol, invitations and AV coverage. Iraq's committee is chaired by Mr Alaa K Yasri, Iraq's Governor for OPEC.

To mark OPEC's Diamond Anniversary, PRID additionally produced an extensive 20-minute documentary film that explores OPEC's history, founding and other key milestones in 2020 and continued to update it in 2021. The research, collaboration, writing, script development and production of this large-scale project took place over a number of months and involved many PRID colleagues. Research drew on various historical literature and video productions.

Editorial Unit

The Editorial Unit directly supported the OPEC Secretary General and other Members of Management in carrying out their duties in 2021 through the provision of speeches, video scripts, talking points, media messaging and background information for interviews and commentaries.

Articles were written for various magazines, including the *OB*. Additionally, a great deal of time and effort was spent editing, revising and proofreading research documents,

presentations and reports and offering support at various meetings.

Speeches and statements

In 2021, over 185 speeches were written for the Secretary General, the Director of the RD and other OPEC officials, compared with over 150 speeches in 2020 and around 120 in 2019, reflecting the growing number of meetings.

The Secretary General virtually attended a great number of major industry events throughout the year and delivered keynote speeches, statements and interventions. They included inter alia: the 11th Gulf Intelligence UAE Energy Forum; S&P Global Platts Americas Petroleum and Energy Conference; Atlantic Global Council Forum; 6th Iranian Oil and Energy Club Congress and Exhibition; World Economic Forum; CERAWeek 2021; CERAWeek private session with financial market participants; Nigeria 'Decade of Gas' summit; 12th SEDAS Meeting with GECF; CERAWeek private session on climate and sustainability; 5th IEA-IEF-OPEC Symposium on Coal and Gas Market Outlooks; CERAWeek private session with US tight oil/independents; CERAWeek private session on mobility issues; RBC event; 100th CPC anniversary; Nigeria International Petroleum Summit; Atlantic Council panel event; Nigerian Association for Energy Economics; Nigeria Oil and Gas Exhibition; 4th Valuechain Annual Lecture & Awards; Atlantic Council Net Zero panel event; GASTECH 2021; BPGIC Ceremony; Energy Intelligence Forum; Russia Energy Week; Vienna Energy Scholarship Programme; ARDA Week; XXVI International Conference Oil and Gas of Turkmenistan; CERAWeek India Energy Forum; 2021 Annual NAEC Conference; Conference of the Parties (COP)26; 32nd

Ministerial Meeting of the Energy Charter Conference; and Africa Energy Week.

Speeches were written in collaboration between PRID and RD for various conferences, seminars, workshops and meetings. These messages were delivered by the Secretary General, senior OPEC officials, as well as high-level members of MC delegations to representatives from all sectors of the energy industry, as well as governments, academia and the media.

Interest was very high in OPEC's activities and messages in 2021, as is clear by the reporting and analysis of speeches, statements and interventions delivered at various events. The subsequent publication of many of these on the OPEC website and selected excerpts on the Organization's social media platforms continues to be useful in generating traffic, attracting positive coverage and disseminating the Secretariat's message.

In 2021, guest editorials, articles and Q&As were provided for several publications. These included – Articles: Nigeria at 50; Article for the DUNYA daily newspaper (Turkey); Op-Ed on climate change in the lead up to COP26. Q&As: On the Energy Transition for the Financial Times; and Nigeria at 50 for the Nigerian Oil Ministry.

JMMC and JTC

There were 11 JTC and 11 JMMC meetings in 2021, each of which required editorial and speechwriting support. The editorial team prepared speeches for the Secretary General, the Chairman of the JMMC and the President of the Conference for these occasions; drafted press releases for each meeting; and provided editorial assistance for the finalization of committee reports. JMMC meetings were extensively covered in the *OB* throughout the year.

Videos

In addition to the editorial section's regular activities, it began in recent years to produce a large number of scripts and voice-overs for videos. This activity increased significantly since 2018, with several scripts written per year. Additionally, videos were made each month on the *MOMR* for the OPEC website, as well as one for the *ASB* and *WOO*. An OPEC 60-year anniversary film continued to be updated.

Publications

PRID made a significant contribution to all major publications, including editorial support, input, promotion and production. These contributions helped ensure the consistency of editorial quality, style, messaging and design. OPEC publications in 2021 included the regularly produced, flagship *MOMR*, which is closely followed by the oil industry, as well as many other external and internal documents. Editorial staff assisted in providing editorial advice and input of various kinds for departments within the Secretariat upon request over the year.

Another regular feature of PRID's Annual Work Programme is the annual OPEC Diary. The editorial content for the diary is generated and edited by PRID. The *ASB* continues to be published annually, providing accurate, reliable and timely historical data on various aspects of the global oil and gas industry. The 15th edition of the *WOO*, launched at the end of September, provides an in-depth look by the Secretariat at the unprecedented scale and impact of the COVID-19 pandemic on the global energy and oil markets. It also provides a thorough review and assessment of the medium- and long-term prospects for the global oil industry to 2045, as well as analysis of various sensitivities that have the

potential to impact the petroleum industry in the years ahead. This document has become a valuable reference tool for people in the industry, and interactive versions of the *WOO* have been available for some years.

Large parts of the *Annual Report (AR)* – which provides a detailed description of the market for the year, as well as activities of all departments/sections/units of the Secretariat – are produced by the editorial section, and its editing and production are undertaken in-house.

The monthly *OB* continued to highlight the activities of the Secretariat and the Organization's MCs. Its coverage encompasses articles of interest on various topical issues, as well as informative analytical features. In 2021, editorial staff and contributors wrote a total of 137 articles and features for the *Bulletin*.

Of note in 2021 were articles on the following topics: in December (2020)-January, coverage of the 180th Meeting of the OPEC Conference and 12th ONOMM, including ministerial interviews and impressions; the 8th OPEC-non-OPEC Technical Meeting; Secretary General Barkindo's attendance at the first Virtual Nigeria Oil and Gas Conference; Crescent Ideas Forum on the post-pandemic outlook; ADNOC Youth Forum; Obituaries on former Secretaries General Dr Francisco R Parra and Dr Abderrahman Khene; and the OPEC-China and Asian Energy and Oil Outlook dialogues.

For the February–March edition, there was coverage of the 26th and 27th JMMC; 14th ONOMM; UAE Global Energy Forum; Atlantic Council Global Energy Forum; 2021 legal webinar series; GECF Global Gas Outlook launch; a spotlight on Saudi Arabia; Libya's Mustafa Sanalla receiving a US State Department award; Americas Petroleum and Energy Conference by S&P Global Platts; an obituary on Sheikh Ahmed Zaki Yamani; along with

articles on Women in Energy: Dr Cornelia Meyer; Blue hydrogen; and a book review on uncovering commodities.

In the April–May edition, there was coverage of the 15th ONOMM; IEA-IEF-OPEC gas and coal outlooks; Nigeria launching the 'Decade of Gas'; GECF special meeting on data and statistics; Chevron; International Monetary Fund and World Bank meetings; Saudi Green Initiatives; report on air travel; Al Jaber being named Energy Executive of the Year; and a tribute to John Deferios, who was leaving CNN.

The June–July edition was a special edition on Nigeria, celebrating its 50 years in OPEC. Coverage included an exclusive interview with President of Nigeria Muhammadu Buhari; interviews with Timipre Sylva, Minister of State for Petroleum Resources and other Nigerian officials; an overview of Nigerian OPEC Secretaries General and Governors, as well as Secretariat Staff; Dr Rilwanu Lukman; the OPEC-Nigeria partnership; opportunities and new approaches; and cultural coverage, including stories on Abuja, the country's culture, and initiatives to reduce energy poverty. The edition also discussed expansion of the OPEC dialogue series to Africa and covered the 17th ONOMM.

The August edition of the *Bulletin* included coverage of the 19th ONOMM; the Secretary General's attendance at the inauguration of new Iranian President Ebrahim Raisi and a farewell to longest-serving oil minister in OPEC Bijan Namdar Zanganeh; coverage of the Nigeria Oil and Gas Conference and Exhibition and the Secretary General's first return to Nigeria since the beginning of COVID-19; the Alirio Parra Lifetime Achievement Award, which was received by the Secretary General; an inaugural visit to Congo; and special features on decarbonizing the supply chain and newly

selected World Heritage sites in OPEC Member Countries Gabon, IR Iran and Saudi Arabia.

The September–October edition covered the launch of the 15th edition of the *WOO* and 2021 *ASB*; the historical cooperation between OPEC and Venezuela; the 21st ONOMM; OPEC–Russia Energy Dialogue, including Russia Energy Week; oil and gas in a net-zero world; a visit to the Fujairah storage complex; the 3rd Annual Legal Workshop; inaugural technical workshop with energy companies; obituary on Abdelaziz Bouteflika, former President of Algeria; United Arab Emirates session on female emancipation; the first Vienna Energy Scholar Programme; and the World Expo in Dubai.

November saw a special edition on the 5th anniversary of the DoC, including full coverage of historical events from 2016 until the marking of the historic milestone, including reflections by Heads of Delegation of Iraq, Kuwait and Bahrain. Additionally, there was regular coverage of the 22nd ONOMM, OPEC and GECF reaching a new milestone; the OPEC–India Dialogue; COP26; Saudi Arabia’s launch of three milestone green initiatives; the United Arab Emirates celebrating 50 years since its founding; and a guest article on a new bank for a low-carbon future.

The December–January issue covered the appointment of Haitham Al-Ghais as next OPEC Secretary General; the 182nd Meeting of the Conference; 24th ONOMM; mission to Iraq; the ancient city of Ur; obituary for Abdullah Ismail; ADIPEC 2021; 5th High-level OPEC–China Energy Dialogue; 23rd World Petroleum Congress; the European Association of Geoscientists and Engineers; first-ever MSDBC Oil, Gas and Power Conference and Exhibition; 10th DoC Technical Meeting; Vienna Energy Club; Expo 2020 in Dubai, United Arab Emirates; and a feature on bringing new life to old oil wells.

Meetings of the OPEC Conference and the JMMC, as well as OPEC and non-OPEC Ministerial Meetings, were always heavily covered from many angles in the *Bulletin*.

Media relations and news monitoring

Another tool used to help improve and enhance the image of the Organization was media relations, which includes the coordination of media coverage through one-on-one interviews with the Secretary General, press conferences and briefings, speeches and statements, as well as the pro-active seeking of further networking opportunities among media outlets and journalists. This has helped to ensure that journalists have better and more timely information about – as well as a better understanding of – the Organization’s activities, serving to improve overall coverage of OPEC.

The Organization’s media exposure continued to be strong globally through the Secretary General’s many interventions, as well as through the Secretariat’s ongoing research and public relations activities.

Staff provided background information upon request to journalists from various media outlets, as well as contextual information for the Secretary General for various interviews and meetings.

The editorial section continued throughout the year to produce the Daily News Summary. This mailing/publication is distributed by e-mail as part of a larger package, and serves to provide a quick overview every weekday morning of the latest energy-related news.

Public Relations Unit

As part of achieving OPEC’s strategy and objectives, and as part of PRID’s overall work

programme, the PR unit has conducted many activities to reach a wider and more varied audience, raising awareness about OPEC, enhancing its image and sharing its perspectives, and addressing any misconceptions about the Organization.

The PR Unit also continued to frequently monitor the media and analyze reports published about the Organization, as well as advise on suitable responses and appropriate strategies. Around 45 reports were produced on OPEC press coverage, the Secretary General's activities and engagements, meetings and conferences, and other events and occasions. The reports featured news stories by international media, Arabic media, social media coverage, as well as some key highlights.

PRID additionally assessed its media performance on a regular basis as part of its plan to further advance its media relations and elevate its role in PRID's overall communication strategy.

Conference preparations

The pandemic prevented meetings from taking place in person in 2021. The PR Unit was responsible for facilitating many virtual press conferences. These events were widely attended and followed by international media and industry analysts from all over the world, in addition to a solid following of OPEC's livestream services on the Organization's website and YouTube account.

Outreach programme

The main purpose of the outreach programme is to have two-way communication with the public, as well as the local community, in order to achieve overall organizational objectives, mainly related to raising awareness about the Organization's mission,

enhancing perception and creating support within the host country, Austria.

The programme has in the past focused on education; international community events; the City of Vienna; and cultural events.

The PR unit received many enquiries and requests from the general public, as well as from MCs, regarding the provision of AV material and publications, answered many questions related to OPEC activities and provided background information.

The main activities conducted in 2021 are summarized as follows:

Briefing programme

Briefings are important in establishing two-way communication with the public, receiving opportunities to uncover how the public perceives OPEC and how to better address such perceptions, while raising awareness about the objectives and goals of the Organization and promoting the Organization's publications. They also provide an opportunity to disseminate the Organization's key messages and create a better understanding of the Organization's decisions and actions.

In 2021, the Secretariat received more than 30 requests from around the world. However, due to the COVID-19 pandemic and related lockdown and restriction measures aiming to slow the spread of the virus, only 22 virtual briefings were conducted, and the rest were cancelled. More than 518 participants took part in the online briefings from 19 different countries from around the world, including some OPEC Member Countries.

Visits

Due to the COVID-19 pandemic, the PR Unit could respond to only one invitation in Vienna, OPEC's host city, where a general

presentation about OPEC, followed by a Q&A session, was offered in person.

Workshops, seminars and exhibitions

Due to COVID-19, the Science and Engineering Exhibition took place online. OPEC continued its support of the student fair involving international schools in Vienna and Europe, which compete in the fields of science and engineering. The fair took place in a hybrid format; OPEC had the chance to sponsor the event, as well as participate virtually.

Launching the WOO

The 2021 edition of the *WOO* was launched in hybrid format and featured key industry figures, including the OPEC Secretary General and Professor Thomas Lindner of the Executive Academy at the Vienna University of Economics and Business. The event was livestreamed via the Organization's website and YouTube channel. The PR Unit was involved in many aspects of the high-profile event, including managing the media, launching on the website and conducting full AV coverage.

Launching the ASB

The 56th edition of OPEC's *ASB* was launched in 2021 via videoconference. The event was attended by the OPEC Secretary General; Professor Lindner; Member Country representatives; the Secretariat's Members of Management; along with journalists and analysts. The launch was also livestreamed via the Organization's website and YouTube channel. The PR Unit was involved in many of the event's activities, including managing the media, the website launch and complete AV coverage.

OPEC Diary

The *OPEC Diary* is an annual publication that the PR team produces, targeting between

3,000–4,000 recipients from producing countries (including OPEC MCs), consuming countries, embassies, research institutes, academia, national oil companies, international oil companies, international organizations (including OPEC and OPEC Fund employees) and others. The *Diary* includes useful information about OPEC and its MCs.

News monitoring

What the Papers Say (WTPS) continues to be produced daily. It is prepared on the basis of two reports received morning and afternoon from trusted news providers. The content of the WTPS includes news about energy in general, as well as petroleum, OPEC and its MCs, and constitutes a selection of the most important and informative articles from the international media. The WTPS is part of a larger daily news package and is distributed to OPEC officials (Ministers, Governors and National Representatives) in addition to the Secretary General and Secretariat staff.

Distribution of publications

The distribution of printed materials plays a very important role in disseminating information about the Organization's activities. To this end, PRID continued to review and update mailing lists and distribution networks for key publications, with additional input and more rigorous review recommended in order to expand and strengthen them. Mailing lists included the media, analysts, banks, investment companies, universities, government institutions and more. Along with the dispatch of publications, email alerts are sent out.

Distribution of publications is undertaken in coordination with related departments. PRID facilitates the distribution of the *ASB* and the *WOO*, in addition to the *OB* and the

AR according to an updated mailing list supplied by the PR Unit.

Missions

In 2021, PRID began to take part in exhibitions and conferences after these were severely restricted in 2020 due to the pandemic. PRID had a stand at African Energy Week held in Cape Town, South Africa; Nigeria Oil and Gas Event; and ADIPEC 2021. OPEC's latest publications, including the flagship *WOO*, *ASB*, *MOMR* and *OB*, were distributed. Additionally, in-person missions were made to Congo and IR Iran in August, Venezuela and the United Arab Emirates in September and the Russian Federation in October.

PRID served the various missions by preparing background documents and media highlight reports.

Corporate gifts

Gifts facilitate the promotion of hospitality and help maintain the good image of the Organization. The PR Unit organized the production of many special gifts for OPEC's 60th anniversary. Gifts are generally provided by the PR Unit, which selects, negotiates and arranges with PRID's D&P, as well as local vendors, addressing logo design, quality control, invoice approval and gift handling.

Website and electronic mailing lists

In 2021, PRID continued to maintain and update the content of the Organization's website in a timely and accurate manner with press releases, news items, speeches, statements, publications booklets and reports, data and graphs, videos, information about its MCs, employment opportunities, etc.

Over the year, 42 press releases were published, more than the previous year, and the number of news releases rose to 72 over

58 in 2020. A huge number of photographs accompanied much of the website content. Live streaming of OPEC and DoC Ministerial Meetings, as well as other events, including the *WOO* and *ASB* launches, was provided through the OPEC website.

New modules and applications were introduced to enhance the usability, functionality, look and feel of the website. These were incorporated in order to make website browsing more user-friendly overall. PRID continued to monitor the number of views to the OPEC website's various pages and prepared monthly reports on this data. These reports are critical to website operations, as the Department continues to ensure that visitors find the information they require in an easy and practical manner, and works on enhancements as needed. In general, the website attracted more than 4.54 million views in 2021.

PRID continued to maintain and update its digital mailing lists, which consist mainly of institutional representatives, officials, journalists, news agencies, analysts, banks, international organizations, etc. The lists include around 1,000 recipients and were used to communicate decisions and announcements related to OPEC and the DoC, among others, including the forwarding of press releases and publications, website update alerts, daily and weekly basket price data, details on meetings and important events, and general press information and background. They proved to be a timely and effective tool in informing the public about OPEC and its activities. Positive feedback was also received by the Department regarding this service.

Regular monitoring was undertaken of messages received through the website's email service and contact forms, as well as through various other means. These generally provided positive feedback to PRID on

various issues, while various requests were attended to by the Secretariat.

Social media

Social media plays a critical role in the daily routine of most organizations. It is also considered to be a cornerstone communication tool.

In a concrete attempt by OPEC to expand its reach and improve its information dissemination practices, the Organization inaugurated its official Facebook Page in 2017. Facebook followers rose to over 46,500 from the launch until the end of 2021. Impressions (total number of views and visits) exceeded 4.5 million, while the reach (total number of visitors) was at around 2.48 million.

In line with plans to expand its social media outreach, OPEC officially launched a Twitter account in March 2018. The number of followers reached 53,085 by the end of 2021, while the number of impressions (total number of views, including repeated visits) was at around 26.75 million. Twitter has become the preferred social media platform for stakeholders in energy and other related fields to exchange information and share ideas and views about the industry.

Highlights of press and news releases, speeches, interviews with the President of the Conference, the Secretary General, Heads of Delegations and Ministers of participating non-OPEC countries in the historic DoC, press conferences, meetings and conferences, and OPEC publications were posted in a consistent and continuous fashion on Facebook and Twitter for the effective dissemination of information. Various campaigns for the *MOMR*, *ASB* and *WOO* (books and apps) were developed to promote and widen the distribution of vital information and data in these essential publications. Content was specifi-

cally tailored and designed for social media messaging in collaboration with respective departments within the Secretariat.

In furthering the promotion of OPEC and widening the Organization's presence on social media platforms, PRID, through the social media team, collaborated with organizers of many high-level industry gatherings to better coordinate and promote content during events. This has further improved confidence among stakeholders in the various tools the Organization is incorporating in its public relations strategy.

Additional Facebook and Twitter features were used to boost OPEC's presence on social media platforms. Paid promotion services provided by social media platforms were used to further strengthen the presence of the Organization's accounts and reach a broader audience.

Noting the importance of YouTube as a leading video-based social media platform, PRID livestreamed many events, including Meetings of the OPEC Conference, ONOMMs, JMMC meetings and the launches of the 2021 *ASB* and *WOO*, in order to reach a wider public and boost PRID's information dissemination efforts at global scale. PRID also published many videos on YouTube, such as one marking the 5th Anniversary of the DoC, opening sessions of ministerial meetings, as well as the Secretary General's public engagements.

PRID also continued its efforts to raise awareness and educate its audience on the importance and uses of petroleum and its products through its social media platforms.

Audio-visual/multimedia services

The unprecedented number of webinars and videoconferences held in 2021 significantly elevated the demand for AV services. This went above and beyond regular services,

which included production of the 'Year-in-Review', highlights and wrap-ups of Ministerial Meetings, and updating of official OPEC films on a regular basis. OPEC videos to accompany events have become common over the past few years and were regularly requested and created for OPEC's Website and social media activities.

The AV team started video-recording conferences and all major meetings in 2020. The team aided the headquarters in implementing VC equipment, together with the IT department. This activity continued in 2021.

Meetings of the OPEC Conference, as well as ONOMMs were broadcast live, and parts of these meetings were made available as on-demand videos on OPEC's official website.

The virtual *WOO* launch was a hybrid between a podium discussion in the main conference room at OPEC's Headquarters in Vienna and a teleconference, and saw many virtual attendees. A special four-minute 3D animation promo key message video was produced to accompany OPEC's flagship release.

Intensive efforts were spent on media productions, including videos, interviews, photos and post-production for many events over the year, including JMMC and JTC meetings.

Photo and video coverage was undertaken for archival purposes of visitors prior to the pandemic, and later of virtual meetings of the BoG and the ECB, the MDTC, workshops and roundtables. The AV team shared photographs and videos with OPEC MCs and distributed them to international print and broadcast media for publication purposes.

In addition, many photo albums were produced throughout the year.

Design and Production

In 2021, D&P provided various designs and layouts for flagship publications and high-level meetings.

The *WOO* design focused on a layout that best supports its messages in the most convenient way and grants readers consistency. Although the *WOO* launch was digital in 2021, it was flanked by materials which could visually communicate at a glance the most important facts in the book and transfer the look and feel of the document to the audience. Supporting materials such as roll-ups were designed in collaboration with ESD to highlight key takeaways. D&P was responsible for designing, typesetting, producing and overseeing the entire printing process of various publications and additional materials.

The design, layout and finishing of the *ASB* was undertaken by D&P. In addition to the 'full' version, a smaller pocket version was designed that displayed the most important tables and graphs in a consolidated form. D&P was responsible for designing, typesetting, producing and overseeing the printing of this publication. The *ASB* and *WOO* were brought closer together in terms of visual appearance.

The *AR* was put together in cooperation with other departments of the Secretariat. D&P was responsible for designing, typesetting, producing and overseeing the printing of this publication.

The *OB* continued to be laid out, typeset and produced by the team, which coordinates and oversees its printing at an outside printing service. Throughout the year, the layout of the *Bulletin* was adapted to fit state-of-the-art corporate publication trends in an international and multicultural environment in coordination with the Editorial Unit.

In 2021, the *OPEC Perspectives*, a collection of all speeches for the year, was designed as a comprehensive Secretariat publication.

Numerous logo designs were also designed and produced throughout the year for in-house OPEC meetings and events, including logos for the 5th anniversary of the DoC. Nameplates, programmes, badges, notepads, giveaways and corporate gifts were also produced.

Additionally, the D&P provided visuals for various meetings to disseminate the Secretariat's key messages. Posters and roll-ups for internal and external use were designed to display information on OPEC, MCs, the DoC, the CoC and highlight the Organization's key messages.

In order to set up a corporate design for all JMMC meetings, as well as other high-level meetings, the Unit collaborated with host countries to streamline and prepare designs.

Many visuals published on social media were created by D&P, which ensured consistent visual messaging throughout the media mix.

The designers also provided designs for and produced various gift items and photo albums.

Training

Training programmes were suspended for the year due to COVID-19. PRID staff participated in different organizational task forces and committees, and worked closely on projects with other departments, including the 60th Anniversary Organizing Committee, the Seminar Organizing Committee, the OPEC Academy and the Task Force on Confidentiality.

Administration & IT Services Department

The conventional working environment changed in the context of the COVID-19 pan-

demic, with teleworking/home office becoming dominant. Despite the fact that the Administration and IT Services Department (AITSD) is facing a critical shortage of manpower, it continued to provide IT services, along with administrative and logistical support, to the highest standards of efficiency and professionalism, ensuring the smooth operation of the entire OPEC Secretariat.

The AITSD's main deliverables and achievements in 2021 are summarized as follows:

Administration

The primary objective of Administration staff work is to ensure the provision of all necessary services in order to facilitate the smooth running of the Secretariat's day-to-day affairs, and allow various specialized areas of activity to meet their targets. These services include, but are not limited to: procurement and disposal; travel and transportation services; arrangements for all meetings and entertainment functions in Vienna; implementation of the Headquarters Agreement; visa support; legitimation/diplomatic ID cards; import declarations; diplomatic license plates; store management; maintenance of the OPEC Secretariat, as well as the Secretary General's residence; security and safety.

Highlights

- Administration developed, in a cross-departmental effort and with the support of the organization's Medical Advisors, a three-phase implementation plan for the OPEC Secretariat to respond to the dynamic COVID-19 pandemic, with the objective of ensuring the health and safety of all staff members and maintaining the full functionality of the organization.

Regular senior management and interdepartmental coordination meetings were set up to ensure maximum safety at the OPEC premises and in-house medical support. Furthermore, Administration was involved in the development and organization of an in-house vaccination programme for all staff and family, which led to a vaccination rate among staff of 97% by the end of 2021. A special safety and cleaning programme was developed for the Secretariat and carried out to respond both safely and efficiently to the new realities and challenges around the COVID-19 pandemic. This included the installation of additional safety measures at the OPEC premises, the development of COVID-19 information pamphlets and in-house meeting guidelines, the provision of free COVID-19 tests, facemasks and disinfectant for staff members and the acquisition of special cleaning devices to provide a safe environment. In addition, Administration prepared regular COVID-19 updates about important developments, rules and regulations related to the pandemic, which changed rapidly and manifold over the second half of the year.

- In connection with the progress of COVID-19 vaccinations among staff, Administration supported staff members with preparatory errands in the set-up of the Green Pass app and assisted throughout the process by closely cooperating with relevant authorities and OPEC's Medical Advisors.
- The Administration Section provided support in form and content for the internal audit, which closed in 2021.

In addition, the Section substantially contributed to ensuring the efficient implementation of auditor recommendations, an activity regularly monitored by the Audit Committee.

- Preparations for the next OPEC International Seminar continued, including the securing of Hofburg Palace and City Hall as main venues. Several committee meetings took place throughout the year to ensure a successful 8th OPEC International Seminar.
- The Administration Section was actively involved in preparations for the 60th OPEC Anniversary, planned to take place in Baghdad, but which was postponed to 2022 due to the COVID-19 pandemic.

IT Services Section

The IT Services Section is responsible for providing the Secretariat with secure and reliable IT services. It constantly explores and keeps abreast of new technological developments in order to provide the Secretariat with the most effective and up-to-date IT infrastructure.

It also provides professional printing/photocopying, telecommunications and mail/courier services to the Secretariat.

The COVID-19 pandemic sharpened the focus of the critical role of the IT Section. Secretariat operations would have come to a standstill without a strong IT Services Section, which rapidly and effectively facilitated a continuous workflow under imposed lockdowns through:

- Provision of the possibility for most staff to work remotely. This includes secure remote access capability to OPEC IT systems via VPN, while the number of laptops provided to OPEC staff expanded three-fold (from 35 to 105) in order to address this issue. In 2021, the

IT Section continued to add to capacity and improve the infrastructure of the home office facility for staff members by provisioning new state-of-the-art laptops and monitors in order to further increase staff productivity when working remotely.

- Provision of the technical possibility to securely run virtual OPEC meetings (Conferences, Ministerial Meetings, BoG meetings, workshops, etc.). In order to achieve this, an additional highly secure videoconferencing system (Cisco Meeting Server – used when utmost confidentiality is required) and the Cisco Webex cloud system (for public events like press conferences) were acquired and installed. State-of-the-art audio and video equipment was also installed in the main conferencing rooms.

In spite of pandemic restrictions, two staff were on-site daily to develop and keep the infrastructure up and running, in addition to providing support to more than 350 videoconferences (sometimes three videoconferences a day) – including support provided to OPEC staff for videoconferences not organized by OPEC.

Although operating with reduced personnel and under immense pressure due to the pandemic situation, IT Services additionally completed the following projects in 2021:

- Review of disaster recovery and business continuity plans – including the introduction of new storage systems, expansion of virtual server capacity and a fibre optics link capacity (this is a very complex technical project addressing core infrastructure supporting data processing in OPEC).

- Upgrade of the Cisco Voice infrastructure.
- Execution of IT security projects as tasked by the Information Security Leadership Committee.

The completion of the following projects which were part of the original Work Plan for 2021, have been postponed to 2022 or later:

- Enhancement of end-point security, web browsing and email infrastructure.
- Enhancement of Data Centre infrastructure (new power distribution for racks, enhancement of overall monitoring infrastructure at both the OPEC and OPEC Fund for International Development Data Centres).
- Upgrade of the Data Domain infrastructure used to conduct OPEC backups.

Finance & Human Resources Department

The Finance & Human Resources Department continued to focus on delivering innovative human resources and financial strategies by ensuring the efficiency of each business process and the quality of its services, as well as providing world-class management of the Organization's human and financial assets in 2021.

The Finance Section successfully executed the 2021 budget with a surplus due to efficiency measures and COVID-19-related restrictions, and prepared and presented a zero growth (in real terms) 2022 budget to the BoG for approval.

Furthermore it revised the ERP contract in view of a go-live of the system in 2022, monitored the flow of funds in line with the Financial Regulations, as well as the situation regarding increasing bank fees.

In addition, it supported Internal Auditor Ernst & Young, as well as the Audit

Committee, provided regular reports to MCs, the Support Services and RD, passed the 2020 External Audit with an unmodified audit opinion and tendered for new audit firm KPMG, along with coordinating the Fraud Prevention and Detection Plan with the Internal Auditor and the LO.

In addition to providing personnel-related services to the Secretariat, the Human Resources Section (HRS) continued to monitor all human resources processes with a view to improving the efficiency of each process, as well as the quality of services and accuracy of data provided by the section, by applying modern technology wherever possible. The section also continued its efforts to utilize the Secretariat's available manpower to the maximum extent possible to ensure efficiency and proficiency.

The year 2021 continued to be challenging regarding ensuring the smooth running of day-to-day operations due to a surge of various coronavirus mutations and repeated lockdowns in Austria. The Section was further committed to ensuring the well-being of the

whole Secretariat through good coordination and cooperation with the Secretariat's medical advisors, as well as the Administration and IT Services Department. The Department made every effort to ensure business continuity in all of its activities by fully supporting the efficient implementation of teleworking, along with realizing online training and job interviews wherever possible.

In line with the 2021 Category I Recruitment Plan presented to and approved by the 158th BoG meeting in May 2021, the HRS successfully conducted interview processes for 11 Category I positions in person, which had been put on hold due to the pandemic. As a result, six new Category I staff members joined the Secretariat by the end of December 2021 and the remaining three in January and February of 2022. The Section efficiently implemented the on-board process for new staff members, the departure of staff members who left the Secretariat on 31 December 2021, as well as the overlap between the two, which continued in part at the beginning of 2022.

Heads of Delegation

Algeria



Mohamed Arkab

Angola



Dr Diamantino Pedro Azevedo
President of the Conference in 2021

Republic of the Congo



Bruno Jean-Richard Itoua

Equatorial Guinea



Gabriel Mbaga Obiang Lima

Gabon



Vincent de Paul Massassa

IR Iran



Eng Javad Owji

Iraq



Ihsan Abdul Jabbar Ismaeel

Kuwait



Dr Mohammad Abdullateef Al-Fares

Libya



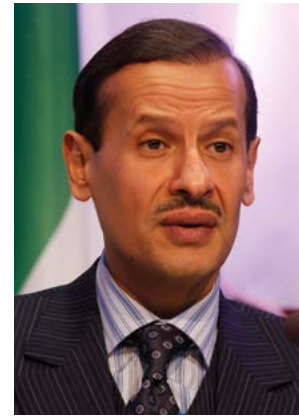
Mohamed M Oun

Nigeria



Timipre Sylva

Saudi Arabia



HRH Prince Abdul Aziz Bin
Salman Bin Abdulaziz Al Saud

United Arab Emirates



Suhail Mohamed Al Mazrouei

Venezuela



Tareck El Aissami

Outgoing Heads of Delegation by country

Algeria



Abdelmajid Attar
(to 21 February 2021)

Congo



Jean-March Thystere Tchicaya
(to 14 May 2021)

IR Iran



Eng Bijan Namdar Zangeneh
(to 25 August 2021)

Libya



Mustafa Sanalla
(to 14 March 2021)



Board of Governors

Algeria

Eng Mohamed Hamel

Angola

Estêvão Pedro

Republic of the Congo

Fabrice Okassa *(from 2 November)*

Térésa Goma *(Governor and Legal Representative)*

Equatorial Guinea

Agustin Mba Okomo

Gabon

Magloire Menie Akoue

IR Iran

Dr Amir Hossein Zamaninia

(Chairman of the Board in 2021)

Iraq

Alaa K Yasri

Kuwait

Mohammad Khuder Al-Shatti *(from 15 June)*

Haitham Al-Ghais

Libya

Mustafa Abdulla Al Mukhtar Benisa *(from 17 November)*

Imad A Salem

Nigeria

Dr Adedapo Odulaja

Kingdom of Saudi Arabia

Eng Adeeb Al-Aama

United Arab Emirates

Eng Ahmed Mohamed Alkaabi

Venezuela

Eng Ángel González Saltrón



Left to right: Dr Ayed S Al-Qahtani, Director, Research Division, Dr Amir Hossein Zamaninia, Chairman of the Board of Governors in 2021 and National Representative, IR Iran, Mohammad Sanusi Barkindo, Secretary General, Leonardo Sempértegui, General Legal Counsel and Jose Luis Mora, Head, Finance and Human Resources Department during the 159th Meeting of the BoG held in November 2021.



Economic Commission Board

Algeria

Dr Achraf Benhassine

Angola

Ntika Mbiya Ricardo

Republic of the Congo

No appointment has been made

Equatorial Guinea

Antimo Asumu Obama Asangono *(from 21 April)*

Florencio Oyono Eneme Obono

Gabon

Fernand Epigat

IR Iran

Dr Afshin Javan

Iraq

Mohammed Saadoon Mohsin

Kuwait

Sh. Abdullah Al Sabah *(from 15 June)*

Mohammad Khuder Al-Shatti

Libya

Dr Taher Massoud O Najah

Nigeria

Mele Kyari

Kingdom of Saudi Arabia

Esam Al-Khalifa

United Arab Emirates

Salem Hareb Al Mehairi

Venezuela

Eng Ronny Rafael Romero Rodriguez



Right to left: Mohammad Sanusi Barkindo, Secretary General, Dr Ayed S Al-Qahtani, Director, Research Division, Hafidh Hasan, Head, PR & Information Department and Dr Abderrezak Benyoucef, Head, Energy Studies Department during the 136th Meeting of the ECB held in November 2021.

The background features several overlapping, curved shapes in various shades of purple and lavender. A dark purple shape is prominent on the right side, overlapping a medium purple shape that curves from the top left towards the center. Below these, a light lavender shape curves across the bottom. The overall composition is abstract and modern.

Officials of the Secretariat

Secretary General

Mohammad Sanusi Barkindo

Environmental Matters Unit

Mohammad Ali Zarie Zare

Office of the Secretary General

Shakir M A Alrifaiy

Legal Office

Leonardo Sempértegui

Dr Taiwo Ogunleye

Research Division

Dr Ayed S Al Qahtani

Finance & Human Resources Department

Jose Luis Mora *(left on 31 December)*

Patrick Bongotha

Data Services Department

Boshra AlSeiari

Mohamed Mekerba *(left on 31 December)*

Dr Hossein Hassani *(left on 31 December)*

Dr Mohamed Khalefa Sarrab *(joined on 1 December)*

Mhammed Mouraia *(joined on 1 December)*

Administration & IT Services Department

Abdullah Alakhawand

Energy Studies Department

Dr Abderrezak Benyoucef

Dr Erfan Vafaie Fard *(left on 31 December)*

Moufid Benmerabet

Dr Mohammad A Alkazimi

Irene Etiobhio

Dr Mustapha Sugungun

Reem Alnaeimi *(joined on 13 December)*

Mohammed Attaba *(joined on 1 December)*

Public Relations & Information Department

Hasan Hafidh *(left on 31 December)*

Tofol Al-Nasr

Petroleum Studies Department

Behrooz Baikalizadeh

Imad Alam Al-Khayyat *(left on 31 December)*

Hassan Balfakeih *(left on 31 December)*

Mohammad Ali Danesh *(left on 31 December)*

Hector Hurtado *(left on 31 December)*

Tona Ndamba

Yacine Sariahmed

Dr Asmaa Yaseen

Dr Sulaiman Saad *(joined on 7 December)*

Angel Edjang Memba *(joined on 6 December)*



The Secretary General's Diary

13 January	11 th Gulf Intelligence Global UAE Energy Forum 2021: 'Moving Beyond the Pandemic?'
19 January	Atlantic Council Meeting
25 January	Briefing session with Mr Pedro G Gómez Pensado and colleagues from the World Economic Forum on ESG Developments
26 January	6 th Iranian Oil and Energy Club Congress and Exhibition
27 January	S&P Global Platts Americas Petroleum and Energy Conference
4 February	Book Launch of Dr Emmanuel I Kachikwu, former Honourable Minister of State, Petroleum Resources, Nigeria
4 February	Atlantic Council Private Session
15 February	Private briefing session with Mr Flowers (Wood Mackenzie and Team)
8 March	Private session with the Financial Community within the CERAWeek Programme
15 April	Briefing Session: 'New Pathways to a Sustainable and Resilient Energy System under the CERAWeek Framework'
18 May	IHS Markit private event within the CERAWeek Programme: US Tight Oil/Independents
7 June	4 th Annual Nigeria International Petroleum Summit
14 June	African Diplomatic Orientation and Engagement Programme
6 July	20 th Nigeria Oil & Gas Conference & Exhibition
12 July	4 th Valuechain Annual Lecture & Awards: 'Enhancing Effective Synergy Between Oil and Gas and Maritime Sectors for Greater Value Creation'
20–21 July	4 th Energy Transitions and Climate Sustainability Working Group Meeting
23 July	G20 Energy Initiative: Climate and Energy Joint Ministerial Session
25 July	14 th Nigerian Association for Energy Economics Annual International Conference

5–7 August	Inauguration of the President of the Islamic Republic of Iran
23–25 August	Mission to the Republic of the Congo
15 September	Technical Workshop on Assessing OECD’s Share of Global Commercial Oil Stocks
21–23 September	GASTECH 2021
27–29 September	37 th Asia Pacific Petroleum Conference
27 September	Atlantic Council
6 October	Energy Intelligence Forum: ‘What Next for OPEC-plus?’
11 October	African Refiners and Distributors Association Week
11 October	G24 Ministers and Governors Meeting
12–15 October	Russian Energy Week
20 October	India Energy Forum 2021: Will High Prices Accelerate the Transition Away from Oil?’
20 October	Interaction Between the Honorable Prime Minister of India and Global Oil & Gas Leaders
30–31 October	G20 Energy Initiative Leaders’ Summit
5–18 November	The Abu Dhabi International Petroleum Exhibition & Conference
8–12 November	COP26
12 November	Africa Energy Week
16–17 November	MSGBC Oil, Gas and Power 2021 Conference
4 December	Mediterranean Dialogue 2021: The Decarbonization Challenge

11th Gulf Intelligence Global UAE Energy Forum 2021



Atlantic Council Meeting



G20 Energy Initiative: Climate and Energy Joint Ministerial Session



Inauguration of the President of the Islamic Republic of Iran



India Energy Forum 2021



The Abu Dhabi International Petroleum Exhibition & Conference





Calendar 2021

3 January	47 th Meeting of the Joint Technical Committee (JTC)
4 January	25 th Meeting of the Joint Ministerial Monitoring Committee (JMMC)
4–5 January	13 th OPEC and non-OPEC Ministerial Meeting (ONOMM)
28 January	First meeting of the Long-Term Strategy (LTS) Review 2021
2 February	48 th Meeting of the JTC
3 February	26 th Meeting of the JMMC
17 February	11 th IEA-IEF-OPEC Symposium on Energy Outlooks
2 March	49 th Meeting of the JTC
3 March	27 th Meeting of the JMMC
4 March	14 th ONOMM
29–31 March	21 st Multi-Disciplinary Training Course
30 March	50 th Meeting of the JTC
31 March	28 th Meeting of the JMMC
1 April	15 th ONOMM
12 April	2 nd Meeting of the High-level Working Group on the OPEC LTS
26 April	51 st Meeting of the JTC
27 April	29 th Meeting of the JMMC
27 April	16 th ONOMM
28 April	5 th IEA-IEF-OPEC Symposium on Coal and Gas
17–18 May	20 th OPEC Annual Statistical Meeting
18 May	7 th Meeting of the Audit Committee

19–20 May	158 th Meeting of the Board of Governors (BoG)
26 May	3 rd Workshop on Energy and Information Technology
31 May	52 nd Meeting of the JTC
1 June	30 th Meeting of the JMMC
1 June	17 th ONOMM
2 June	1 st Technical Meeting of the OPEC-Africa Energy Dialogue
2 June	1 st High-level Meeting of the OPEC-Africa Energy Dialogue
15 June	135 th Meeting of the Economic Commission Board (ECB) – Part I
17 June	9 th Technical Meeting of OPEC and non-OPEC Countries Participating in the ‘Declaration of Cooperation’
23 June	135 th Meeting of the ECB – Part II
1 July	53 rd Meeting of the JTC
1 July	181 st Meeting of the Conference
2 July	31 st Meeting of the JMMC –Part I
5 July	31 st Meeting of the JMMC –Part II
5 July	18 th ONOMM
7 July	4 th Technical Workshop on Climate Change: ‘The Role of Circular Carbon Economy and ‘Green Initiatives’ in Combating Climate Change’
8 July	19 th Coordination Meeting on Climate Change
18 July	19 th ONOMM
31 August	54 th Meeting of the JTC
1 September	32 nd Meeting of the JMMC

1 September	20 th ONOMM
6 September	Ministerial Roundtable on Energy, Climate and Sustainable Development
7 September	21 st Special Meeting of the ECB – Part I
13 September	21 st Special Meeting of the ECB – Part II
23 September	3 rd Annual Legal Workshop
27 September	55 th Meeting of the JTC
28 September	Launch of the <i>World Oil Outlook 2021</i>
30 September	Launch of the <i>Annual Statistical Bulletin 2021</i>
4 October	33 rd Meeting of the JMMC
4 October	21 st ONOMM
7 October	4 th Technical Meeting OPEC-Russia Energy Dialogue
11 October	1 st Technical Workshop with Energy Companies
13–15 October	8 th High-level Meeting of the OPEC-Russia Energy Dialogue
18 October	3 rd Annual Legal Workshop
20 October	20 th Coordination Meeting on Climate Change
21 October	8 th Joint IEA-IEF-OPEC Workshop on the Interactions between Physical and Financial Energy Markets
27 October	2 nd High-level Meeting of the Gas Exporting Countries Forum-OPEC Energy Dialogue
27 October	5 th High-level Meeting on LTS Review
28 October	56 th Meeting of the JTC
28 October	4 th Technical Meeting of the OPEC-India Energy Dialogue

28 October	5 th High-level Meeting of the OPEC-India Energy Dialogue}
2–3 November	159 th Meeting of the BoG
4 November	34 th Meeting of the JMMC
4 November	22 nd ONOMM
8 November	7 th Technical Meeting of Asian Energy and Oil Outlook
23–24 November	136 th Meeting of the ECB
1 December	182 nd Meeting of the OPEC Conference
1 December	57 th Meeting of the JTC
2 December	35 th Meeting of the JMMC
2 December	23 rd ONOMM
3 December	5 th High-level Meeting of the OPEC-China Energy Dialogue

11th IEA-IEF-OPEC Symposium on Energy Outlooks



3rd Workshop on Energy and Information Technology



1st High-level Meeting of the OPEC-Africa Energy Dialogue



8th High-level Meeting of the OPEC-Russia Energy Dialogue



2nd High-level Meeting of the GECF-OPEC Energy Dialogue



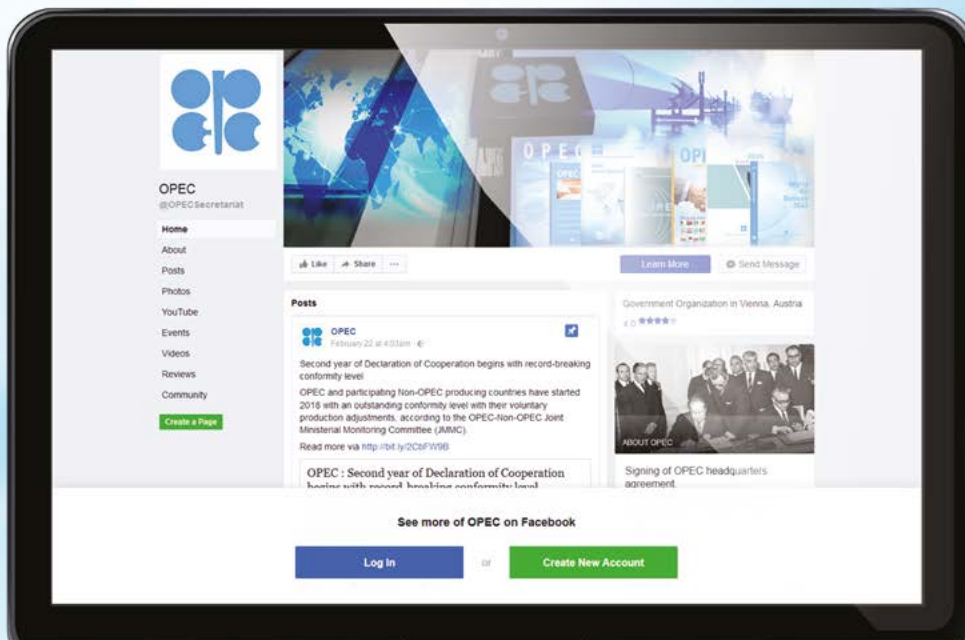
5th High-level Meeting of the OPEC-India Energy Dialogue





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